

BRIGHAM YOUNG
UNIVERSITY



Annual Catalog Issue
1958-59

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Catalog Helps

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Symbols Used

Courses fulfilling general education requirements in each of five basic areas:

- (G-BS) Biological Science
- (G-HA) Humanities and Aesthetics
- (G-PS) Physical Science
- (G-R) Religion
- (G-SS) Social Science

† A general education course which has a prerequisite

* In Administration and Faculty section and in departmental faculty listings, faculty member on leave during the current school year

In other sections of catalog, footnote reference

** Footnote reference

*** Footnote reference

**** Footnote reference

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CATALOG OF COURSES

1958-59

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University Calendar

1958 - 59

Autumn Quarter

September 4 (Saturday): Junior English Proficiency Examination.

September 22, 23 (Monday, Tuesday): Faculty workshop and first regular faculty meeting.

September 24, 25, 26, 27 (Wednesday, Thursday, Friday, Saturday): Orientation and placement tests for all freshmen and sophomores who will register at B.Y.U. for the first time. Late fees will be charged all new students who fail to appear for these tests, which begin Wednesday, September 24, at 1:30 p.m. in the George Albert Smith Fieldhouse.

September 29, 30 (Monday, Tuesday): Registration for all regular and special students. Students will register in an alphabetical order to be announced. A late fee will be charged all students registering after this date.

October 1 (Wednesday): Class instruction begins.

October 13 (Monday): Last day for currently enrolled students to enter new classes.

October 17 (Friday): Last day on which late registration may occur for Autumn Quarter.

October 18 (Saturday): Homecoming.

November 7 (Friday): Last day for dropping classes without receiving a failing grade.

November 10 through December 12: Registration for Winter Quarter.

November 19 (Wednesday): Students withdrawing from school after this date must be doing passing work in each class if they are to discontinue the class without academic failure.

November 27, 28 (Thursday, Friday): Thanksgiving recess.

December 17, 18, 19 (Wednesday, Thursday, Friday): Examination period.

December 19 (Friday): Autumn Quarter closes.

Winter Quarter

January 5 (Monday): Class instruction begins.

January 10 (Saturday): Junior English Proficiency Examination.

January 16 (Friday): Last day for currently enrolled students to enter new classes.

January 23 (Friday): Last day on which late registration may occur for Winter Quarter.

February 6 (Friday): Last day for dropping classes without receiving a failing grade.

February 15 through March 13: Registration for Spring Quarter.

March 16, 17, 18 (Monday, Tuesday, Wednesday): Examination period.

March 18 (Wednesday): Winter Quarter closes.

Spring Quarter

March 23 (Monday): Class instruction begins.

March 28 (Saturday): Junior English Proficiency Examination.

April 3 (Friday): Last day for currently enrolled students to enter new classes.

April 10 (Friday): Last day on which late registration may occur for Spring Quarter.

May 1 (Friday): Last day for dropping classes without receiving a failing grade.

May 4 (Monday): Students desiring to enter the Summer Session who have not previously attended B.Y.U. should submit their applications for admission on or before May 4.

May 15 (Friday): Students withdrawing from school after this date must be doing passing work in each class if they are to discontinue the class without academic failure.

May 30 (Saturday): Senior Day.

June 2, 3, 4 (Tuesday, Wednesday, Thursday): Examination period.

June 4 (Thursday): Baccalaureate Services.

June 5 (Friday): Alumni Day. Eighty-fourth Commencement Exercises.

Summer Quarter

June 15 (Monday): Registration for Summer Quarter.

June 16 (Tuesday): Class instruction begins.

June 20 (Saturday): Junior English Proficiency Examination.

July 17 (Friday): First Summer Term closes.

July 20 (Monday): Registration for Second Term. Class instruction begins.

August 21 (Friday): Second Summer Term ends.

All undergraduate colleges and the Graduate School offer a full quarter of work in the summer.

The Summer Quarter is divided into terms so that in special cases students may be in attendance only part of the summer, if they desire, without hindrance to the completion of their courses. Both regular terms of the Summer Quarter are held on the Provo Campus.

The Summer Quarter provides the opportunity for persons who are employed during the usual nine months of schooling to pursue graduate work. It provides regular students the opportunity to complete requirements for graduation in a shorter time than four years. All facilities of the University are available during the Summer Quarter.

Evening Classes

Evening classes correspond to the above official calendar.

Administration and Faculty

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University Administrative Officers

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Vice-President	Earl C. Crockett
Vice-President	Harvey L. Taylor
General Counsel	Clyde D. Sandgren

DEANS OF COLLEGES

Biological and Agricultural Sciences, Acting Dean	Raymond B. Farnsworth
Commerce	Weldon J. Taylor
Education	Asahel D. Woodruff

Assistant Dean	Antone K. Romney
Family Living	Marion C. Pfund (until July 31, 1958) Jack B. Trunnell (effective August 1, 1958)
Fine Arts	Gerrit de Jong, Jr.
Humanities and Social Sciences	Leonard W. Rice
Physical and Engineering Sciences	Armin J. Hill
Recreation, Physical and Health Education, and Athletics	Milton F. Hartvigsen

DEANS AND DIRECTORS OF SCHOOLS

Graduate School, Dean	A. Smith Pond
Nursing, School of, Director	L. Bernice Chapman
Summer School, Acting Director	Howard T. Reid

DIRECTORS OF DIVISIONS

Religion, Division of	
Graduate Studies	Sidney B. Sperry
Assistant Director Graduate Studies	Chauncey C. Riddle
Undergraduate Studies	David H. Yarn, Jr.
Research Division	H. Tracy Hall

ADMINISTRATIVE OFFICERS OF OTHER ACADEMIC UNITS

Adult Education and Extension Services, Dean	Harold Glen Clark
Assistant to the Dean	Lynn M. Hilton
Audio-Visual Aids, Chairman	Clarence Tyndall
B.Y.U.-Ogden Adult Education Center, Chairman	Mark A. Benson
B.Y.U.-Ricks Adult Education Center, Chairman	J. Kenneth Thatcher
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On-Campus Adult Education, Chairman	Sherman B. Sheffield
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Librarian, Life Sciences Library	June Berry
Librarian, High School Library	June Berry
Librarian, Elementary School Library	Edna Judd
University Archivist	Ralph Hansen

CHAIRMEN OF DEPARTMENTS OF INSTRUCTION

Accounting	H. Verlan Andersen
Agricultural Economics	Glen L. Nelson
Agronomy	R. Chase Allred
Air Science	Colonel Barnett S. Allen
Animal Husbandry	Lawrence Morris

Archaeology	M. Wells Jakeman
Art	Conan E. Mathews
Bacteriology	Don H. Larsen
Bible and Modern Scripture	Eldin Ricks
Botany	Kent H. McKnight
Business Education and Office Management	Edward L. Christensen
Business Management	Clinton L. Oaks
Chemical Engineering Science	Billings Brown
Chemistry	Keith P. Anderson
Church History	Russell R. Rich
Civil Engineering Science	Harry Hodson
Clothing and Textiles	Margaret S. Potter
Economics	
Economics and Management of the Home	Vesta W. Barnett
Education: Instruction	Dean C. Christensen
Educational Administration	Keith R. Oakes
Educational Philosophy and Values	Stephen R. Alley
Educational Research and Services	Robert L. Egbert
Electrical Engineering Science	Jens J. Jonsson
English	Ralph A. Britsch
Family Living, General, In Charge	Virginia Poulson
Food and Nutrition	Marian Bennion
Geography	Elliot Tuttle
Geology and Geological Engineering Science	Kenneth C. Bullock
Health Education	David D. Geddes
History	Eugene E. Campbell
Homemaking Education	Ethel Lee Jewell
Horticulture and Horticultural Specialties	Ernest F. Reimschiessel
Housing and Design	Elizabeth L. Gardner
Human Development and Family Relationships	Blaine M. Porter
Industrial Arts and Drawing	Guy Pierce
Intercollegiate Athletics	Edwin R. Kimball
Journalism	Oliver R. Smith
Languages	Harold W. Lee
L.D.S. Church Organization and Administration	G. Byron Done
Library Science	Hattie M. Knight
Mathematics	Harvey J. Fletcher
Mechanical Engineering Science	Leland K. Baxter
Music	John R. Halliday
Physical Education for Men	Charles J. Hart
Physical Education for Women	Leona Holbrook
Physics	Wayne B. Hales
Political Science	Stewart L. Grow
Psychology	Mark K. Allen
Recreation	Israel Heaton
Sociology	Reed Bradford
Speech and Dramatic Arts	Harold I. Hansen
Theology and Philosophy	Truman G. Madsen
Youth Leadership	Royal B. Stone
Zoology and Entomology	C. Lynn Hayward

ADMINISTRATIVE OFFICERS, NON-INSTRUCTIONAL UNITS

Admissions and Records, Dean	Bliss H. Crandall
Admissions Officer	Orrin H. Jackson
Machine Accounting, Manager	Bliss H. Crandall
Records and Registration Officer	Lucile Spencer
Veterans' Coordinator	Richard K. Grover
Students, Dean	Wesley P. Lloyd
Assistant Dean	Howard T. Reid
Academic Standards, Chairman	Selby G. Clark
Counseling Service, Chairman	Clyde A. Parker
Counselor for Women	Lillian C. Booth
Foreign Students, Adviser	Selby G. Clark
Indian Students, Adviser	Robert F. Gwilliam
Men's Housing Program, Director	Blaine P. Parkinson
Placement Bureau, Director	B. Keith Duffin
Security Officer	Captain Leonard E. Christensen
Special Student Problems, Adviser	Alma W. King
Student Health Services, Director	Dr. Allen H. Barker
Student Organizations, Coordinator	Paul E. Felt
Women's Housing Program, Director	Cleo McCracken
Treasurer, University	Kiefer B. Sauls
Accountant, University	C. Joseph Rowberry
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Auxiliary Services, Director	Ben E. Lewis
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Purchasing Agent	C. R. Peterson
Mail Service, Post Office, Purchasing, Receiving	
Student Housing, Director	Fred A. Schwendiman
University Press, Manager	Franklin R. Haymore
Motion Picture Production, Director	Wetzel O. Whitaker
Physical Plant, Director	Sam F. Brewster
Planning Division, Principal Architect	Richard H. Johnson
Construction Division, Construction Engineer	W. L. Westman
Maintenance and Operations Division,	
Assistant to the Director	Cecil R. Oak
Public Relations, Director	Lester B. Whetten
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Civic and Church Organization Relations, Chairman	Lester B. Whetten
Devotional Assemblies, Chairman	Leland E. Anderson
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High School Relations, Chairman	Dale L. Nelson
Junior College Relations, Chairman	Lester B. Whetten
Lyceums and Musicals, Chairman	Herald R. Clark
Press Relations, Chairman	Edwin J. Butterworth
Program Bureau, Chairman	John D. Burnett

Program Coordinator	Fontell Messervy
Radio and Television Programs, Chairman	Owen S. Rich
Servicemen's Letter Committee, Chairman	T. Earl Pardoe
University and Professional Relations, Chairman	Lester B. Whetten
University Publications, Chairman	Ernest LeRoy Olson
Scheduling of Extracurricular Events, Chairman	Wesley P. Lloyd
Scholarships, Fellowships, and Academic Grants, Chairman	Wesley P. Lloyd
Student Supply	
Chairman of the Board	Herald R. Clark
Manager	H. Neil McKnight

Councils

UNIVERSITY COUNCIL

The University Council consists of the presidency and all members of the faculty with the rank of professor, associate professor, or assistant professor. The University Council is the legislative body of the faculty. Subject to the powers reserved by the Board of Trustees and those exercised either by the president or the Deans' Council, the University Council determines policy and procedure affecting the University and its subdivisions.

DEANS' COUNCIL

The Deans' Council consists of the presidency, all deans, and the directors of schools and divisions.

GRADUATE COUNCIL

The chief administrative body of the graduate faculty is the Graduate Council, which consists of (1) the academic vice-president of the University, the dean of the Graduate School, and the director of research, ex officio; (2) four members of the graduate faculty elected at large for terms of three years; (3) eight members of the graduate faculty, one elected from each of the eight colleges in which there are departments offering graduate work; and (4) one member elected to represent the Division of Religion.

THE EXTENSION SERVICES COUNCIL

The Extension Services Council is an advisory body for the Adult Education and Extension Services.

The Faculty

Emeriti

- James L. Barker Professor Emeritus of Modern Languages
B.A., University of Utah, 1901; L. es L., Université de Neuchatel, 1911; Research in phonetics for Modern Language Association of America, 1924-25 and 1926-27; Member, Société de Linguistique de Paris; Officier d'Académie.
- Clarence S. Boyle Professor Emeritus of Marketing
B.S., Brigham Young University, 1924; M.S., Ed.D., New York University, 1926, 1941.
- William H. Boyle Professor Emeritus of Education
B.A., M.A., Brigham Young University, 1913, 1923.
- Ella Larsen Brown Librarian Emeritus
- Gustave Buggert Assistant Professor Emeritus of Music
- Elsie C. Carroll Associate Professor Emeritus of English
B.S., M.A., Brigham Young University, 1926, 1928.
- Benjamin F. Cummings Professor Emeritus of Modern and
Classical Languages
B.A., University of Utah, 1913.
- Norman Dunn Instructor Emeritus in English
King's Scholar, M.R.S.T., Saltley College, Birmingham, England, 1902-04, 1922.
- Flora D. Fisher Instructor Emeritus in Elementary School
B.S., M.S., Brigham Young University, 1936, 1949.
- May C. Hammond Assistant Professor Emeritus of Elementary Education
B.S., M.S., Brigham Young University, 1934, 1949.
- William F. Hansen Assistant Professor Emeritus of Music
B.S., M.S., Brigham Young University, 1936, 1937.
- John E. Hayes Registrar Emeritus
B.S., Brigham Young University, 1924.
- Harrison Val Hoyt Professor Emeritus of Accounting
B.S., Purdue University, 1913; M.B.A., Harvard University, 1917; Ph.D., Stanford University, 1931.
- Christen Jensen Professor Emeritus of History and Political
Science, Dean Emeritus of the Graduate School
and President Emeritus of the University
B.A., University of Utah, 1907; M.A., Harvard University, 1908; Ph.D., University of Chicago, 1921.
- Bent F. Larsen Professor Emeritus of Art
B.A., Brigham Young University, 1912; M.A., University of Utah, 1922.
- John W. McAllister Instructor Emeritus in Education
and Public School Music
B.A., Brigham Young University, 1927.
- Florence Jepperson Madsen Professor Emeritus of Music
B.M., M.M., Chicago Musical College, 1926, 1927; Doctor of Music, Boguslawski College of Music, 1932; B.A., Brigham Young University, 1934; M.M., hon. Doctor of Music, Chicago College of Music, 1933.
- Franklin Madsen Professor Emeritus of Music
B.A., M.A., Brigham Young University, 1925, 1931; B.M., 1926; M.M., 1927; B.M.E., 1928; Mus. Doc., 1929; M.M.E., 1932; hon. Doctor of Music Education, Boguslawski College of Music, 1933; hon. Doctor of Music Education, Chicago College of Music, 1934.
- Thomas L. Martin Professor Emeritus of Agronomy
and Bacteriology; Dean Emeritus of the
College of Applied Sciences
B.A., Brigham Young University, 1912; Ph.D., Cornell University, 1919.

- T. Earl Pardoe** Professor Emeritus of Speech
B.A., Brigham Young University, 1925; M.A., University of Southern California, 1931;
Ph.D., University of Louisiana, 1936.
- Hermese Peterson** Professor Emeritus of Elementary Education
B.S., Brigham Young University, 1928.
- M. Wilford Poulson** Professor Emeritus of Psychology
B.A., Brigham Young University, 1914; M.A., University of Utah, 1919.
- Stella P. Rich** Assistant Professor Emeritus of English
B.S., Brigham Young University, 1926.
- J. Wyley Sessions** Professor Emeritus of Religious Philosophy
B.S., Utah State Agricultural College, 1911; M.A., University of Idaho, 1928.
- William H. Snell** Professor Emeritus of Industrial Arts
B.A., M.S., Brigham Young University, 1918, 1939.
- Joseph Sudweeks** Associate Professor Emeritus of Religion
B.S., University of Idaho, 1912; M.A., University of Chicago, 1920; Ph.D., University
of Wisconsin, 1925.
- Margaret Summerhays** Assistant Professor Emeritus of Music
Graduate, New England Conservatory of Music, 1916; B.A., Brigham Young Univer-
sity, 1936.
- Effie Warnick** Professor Emeritus of Home Economics
B.S., Utah State Agricultural College, 1914; M.S., Iowa State College, 1937.

Members of the Instructional and Administrative Staff

MEMBERS OF THE PRESIDENCY

- Ernest L. Wilkinson** President of the University
B.A., Brigham Young University, 1921; LL.B., George Washington University, 1926;
S.J.D., Harvard University, 1927.
- Joseph T. Bentley** Administrative Assistant
B.A., Brigham Young University, 1928; M.A., LaSalle Extension University, 1941.
- William E. Berrett** Vice-President
B.A., LL.B., University of Utah, 1924, 1933.
- Earl C. Crockett** Vice-President
B.S., University of Utah, 1927; Ph. D., University of California, 1931.
- Harvey L. Taylor** Vice-President
B.S., University of Utah, 1921; M.A., Columbia University, 1925; LL.D., Arizona
State College, 1956.
- Clyde D. Sandgren** General Counsel
B.S., Brigham Young University, 1937; LL.B., St. John's University, 1939.

THE STAFF OF THE UNIVERSITY

- George M. Addy** Instructor in History (1957)
B.A., M.A., Brigham Young University, 1948, 1950; Ph.D., Duke University, 1957.
- Lorna Call Alder** Assistant Professor of Elementary Education (1949)
B.S., Brigham Young University, 1935; M.A., Columbia University, 1940.
- Zane G. Alder** Instructor in English (1955)
B.S., M.S., Utah State Agricultural College, 1948, 1956.
- A. Lester Allen** Assistant Professor of Zoology (1954)
B.A., Ph.D., University of California at Los Angeles, 1946, 1951.
- Col. Barnett S. Allen** Professor of Air Science (1956)

- Mark K. Allen** Professor of Psychology (1946)
B.A., Brigham Young University, 1926; M.A., Stanford University, 1935; Ph.D., Stanford University, 1955.
- Stephen L. Alley** Assistant Professor of Education (1956)
B.S., M.S., University of Utah, 1947, 1951; Ed.D., Harvard University, 1958.
- Dorald M. Allred** Assistant Professor of Zoology and Entomology (1956)
B.A., M.A., Brigham Young University, 1950, 1951; Ph.D., University of Utah, 1954.
- Mildred E. Allred** Instructor in Nursing (1954)
Diploma, Latter-day Saints Hospital, Salt Lake City, 1925; B.S., Brigham Young University, 1943.
- R. Chase Allred** Associate Professor of Agronomy (1955)
B.S., Brigham Young University, 1948; M.S., Kansas State College, 1949; Ph.D., University of Nebraska, 1952.
- Mignon H. Alward** Instructor in Nursing (1953)
Diploma, Latter-day Saints Hospital, Salt Lake City, 1945; B.S., University of Utah, 1946.
- H. Verlan Andersen** Professor of Accounting (1953)
B.S., Brigham Young University, 1940; LL.B., Stanford University, 1946; LL.M., Harvard University, 1948; C.P.A., State of Arizona, 1943.
- *C. Dixon Anderson** Instructor in Modern Languages (1956)
B.A., Brigham Young University, 1953; M.A., University of Texas, 1956. (On leave for further graduate study at University of Texas.)
- *Colleen M. Anderson** Instructor in Nursing (1956)
Diploma, Holy Cross Hospital, Salt Lake City, 1954; B.S., St. Mary-of-the-Wasatch College, 1956. (On leave for further graduate study at Columbia University.)
- Floyd M. Anderson** Associate Professor of Human Development and Family Relationships (1956)
B.S., Brigham Young University, 1950; Ed.D., Teachers College, Columbia University, 1956.
- Keith P. Anderson** Associate Professor of Chemistry (1953)
B.A., Brigham Young University, 1946; Ph.D., Cornell University, 1950.
- *Richard L. Anderson** Assistant Professor of Religion (1955)
B.A., M.A., Brigham Young University, 1951, 1957; LL.B., Harvard University, 1954 (On leave for further graduate study.)
- Vernon L. Anderson** Associate Professor of Modern Languages (1956)
B.A., M.A., University of Utah, 1948, 1949; Ph.D., Stanford University, 1954.
- Hyrum L. Andrus** Assistant Professor of Religion (1956)
B.S., Ricks College 1951; M.S., Brigham Young University 1952; D.S.S., Syracuse University, 1955.
- J. Roman Andrus** Associate Professor of Art and Education (1943)
B.S., M.S., Brigham Young University, 1942, 1943.
- Evelyn Applonie** Instructor in Homemaking Education (1956)
B.S., Utah State Agricultural College, 1945.
- Nina Mae Argyle** Special Instructor in Clothing and Textiles (1957)
B.S., Brigham Young University, 1955.
- Clarence D. Ashton** Associate Professor of Horticulture and Horticultural Specialties (1951)
B.S., Brigham Young University, 1929.
- Hyrum J. Babcock** Assistant Professor of Elementary Education (1954)
B.A. M.A., Ph.D., University of California, 1939, 1940, 1953.
- Vida R. Babcock** Assistant Professor of Nursing (1957)
Diploma, Memorial Hospital, South Bend, Indiana, 1923; B.S., M.A., New York University, 1947, 1953.
- Dale S. Bailey** Instructor in English (1955)
B.A., Brigham Young University, 1952; M.A., Columbia University, 1954.

- *Ariel S. Ballif** Professor of Sociology; Director of the Summer School (1938)
B.S., Brigham Young University, 1925; M.A., Ph.D., University of Southern California, 1937, 1945. (On leave as President of the New Zealand Mission.)
- Richard Ballou** Instructor in Music (1951)
B.A., M.A., Brigham Young University, 1948, 1953.
- Blauer L. Bangerter** Instructor in Physical Education (1953)
B.A., M.S., Brigham Young University, 1951, 1955.
- Reid E. Bankhead** Assistant Professor of Religion (1949)
B.S., University of Utah, 1947; M.Th., Brigham Young University, 1949.
- Frances P. Barlow** Instructor in Human Development and Family Relationships (1954)
B.S., University of Utah, 1933; M.Ed., Utah State Agricultural College, 1938.
- Owen L. Barnett** Associate Professor of Educational Administration (1950)
B.S., M.S., Brigham Young University, 1923, 1927.
- Vesta Barnett** Instructor in Economics and Management of the Home (1956)
B.S., M.Ed., Brigham Young University, 1932, 1954.
- Vernon S. Barney** Assistant Professor of Health and Physical Education (1953)
B.S., M.S., Utah State Agricultural College, 1948, 1956; Diploma in Physical Therapy, Children's Hospital Association School of Physical Therapy, University of California at Los Angeles, 1951.
- Ivan J. Barrett** Assistant Professor of Religion (1953)
B.S., Utah State Agricultural College, 1938; M.S., Brigham Young University, 1947.
- Howard H. Barron** Assistant Professor of Religion (1957)
B.S., M.S., Utah State Agricultural College, 1943, 1950; Ed.D., University of Utah, 1953.
- Davis Bartholomew** Professor of Electrical Engineering (1954)
B.S., University of Utah, 1928; M.S., University of Minnesota, 1940. P.E.E., University of Utah, 1948.
- *J. LaVar Bateman** Associate Professor of Speech (1949)
B.A., Brigham Young University, 1941; M.S., Ph.D., University of Wisconsin, 1947, 1950. (On leave for post doctoral study.)
- *Edith Bartholomew Bauer** Associate Professor of Secondary Education (1945)
B.A., M.A., Brigham Young University, 1930, 1946; Ph.D., University of California (Berkeley), 1956. (On leave with United States Operations Mission in Iran.)
- Leland K. Baxter** Associate Professor of Mechanical Engineering (1953)
B.S., University of New Mexico, 1948; M.S., Ph.D., Purdue University, 1952, 1953.
- John E. Bean** Assistant Professor of Instruction (1957)
B.S., Eastern Oregon College of Education, 1948; M.Ed., University of Oregon, 1953.
- D Elden Beck** Associate Professor of Zoology and Entomology (1938)
B.A., M.A., Brigham Young University, 1929, 1930; Ph.D., Iowa State College, 1933.
- Jay V. Beck** Professor of Bacteriology (1951)
B.A., M.A., Brigham Young University, 1933, 1936; Ph.D., University of California (Berkeley), 1940.
- Wayne M. Beebe** Assistant Professor of Mechanical Engineering (1958)
B.S., M.S., California Institute of Technology, 1951, 1952.
- B. West Belpap** Professor of Church Organization (1951)
B.S., Brigham Young University, 1946; M.A., Ed.D., Columbia University, 1950, 1951.
- Erma Bennett** Instructor in Education: Instruction (1956)
B.S., Brigham Young University, 1936.
- Marian Bennion** Associate Professor of Food and Nutrition (1952)
B.S., Utah State Agricultural College, 1947; M.S., Teachers College, Columbia University, 1949; Ph.D., University of Wisconsin, 1956.

- Anthony I. Bentley, Sr.** Instructor in Religion (1954)
B.A., Brigham Young University, 1930; M.A., University of Southern California, 1940.
- Max J. Berryessa** Assistant Professor of Elementary Education (1948)
B.S., M.S., Brigham Young University, 1948, 1949.
- Seth Bills** Instructor in Education: Instruction (1957)
B.S., Utah State Agricultural College, 1946; M.S., Brigham Young University, 1949.
- Harold J. Bissell** Professor of Geology (1938)
B.S., Brigham Young University, 1934; M.S., Ph.D., University of Iowa, 1936, 1948.
- Angus U. Blackham** Associate Professor of Chemistry (1952)
B.A., Brigham Young University, 1949; M.A., Ph.D., University of Cincinnati, 1950, 1952.
- Ruth S. Bloom** Assistant Professor of Nursing (1955)
Diploma, Brooklyn State Hospital, 1940; B.A., Brooklyn College, 1942; M.P.S., University of Colorado, 1947.
- Lillian C. Booth** Counselor for Women (1938)
B.S., M.S., Brigham Young University, 1940, 1950.
- *Winnifred Bowers** Instructor in Speech (1954)
B.S., M.A., University of Utah, 1946, 1950. (On leave for further graduate study at Columbia University.)
- Genevieve W. Bowman** Instructor in Food and Nutrition (1956)
B. A., Utah State Agricultural College, 1951; M.S., Utah State University, 1957.
- *William Brace** Instructor in Library Science (1954)
B.A., Brigham Young University, 1951; M.A., University of Chicago, 1955. (On leave for further graduate study at University of Chicago.)
- *Charles H. Bradford** Instructor in Economics (1956)
B.S., M.S., University of Utah, 1952, 1953. (On leave as assistant to Senator Wallace Bennett in Washington, D.C.)
- Mary Lythgoe Bradford** Instructor in English (1956)
B.S., M.A., University of Utah, 1953, 1956.
- Reed H. Bradford** Professor of Sociology (1946)
B.A., Brigham Young University, 1937; M.A., Louisiana State University, 1939; M.A., Ph.D., Harvard University, 1941, 1946.
- Merrill K. Bradshaw** Instructor in Music (1957)
B.A., M.A., Brigham Young University, 1954, 1955.
- Marion B. Brady** Instructor in English (1957)
B.A., M.A., Brigham Young University, 1950, 1951.
- Willis H. Brimhall** Instructor in Geology (1956)
B.S., Brigham Young University, 1949; M.S., University of Arizona, 1951.
- Ralph A. Britsch** Associate Professor of English (1938)
B.A., M.A., Brigham Young University, 1933, 1951.
- *H. Smith Broadbent** Professor of Chemistry (1946)
B.S., Brigham Young University, 1942; Ph.D., Iowa State College, 1946. (On leave for post doctoral research in chemistry.)
- Billings Brown** Associate Professor of Chemical Engineering (1953)
B.S., M.S., Ph.D., University of Washington, 1951, 1951, 1953.
- Robert S. Brownlee** Instructor in Music (1955)
B.Mus., Oberlin College, 1952; B.A., M.A., Brigham Young University, 1954, 1955.
- Loren C. Bryner** Professor of Chemistry (1935)
B.S., M.S., Brigham Young University, 1928, 1930; Ph.D., Iowa State College, 1934.
- Maurine F. Bryner** Instructor in Food and Nutrition (1957)
B.S. Brigham Young University, 1928.
- Kenneth C. Bullock** Professor of Geology (1943)
B.S., M.A., Brigham Young University, 1940, 1942; Ph.D., University of Wisconsin, 1949.

- Robert E. Bunker** Instructor in Physical Education;
Assistant Football Coach (1949)
B.S., Utah State Agricultural College, 1937.
- Percy E. Burrup** Professor of Educational Administration (1952)
B.S., M.S., Utah State Agricultural College, 1932, 1941; Ed.D., Colorado State College of Education, 1951.
- Jess R. Bushman** Assistant Professor of Geology (1955)
B.A., Brigham Young University, 1949; Ph.D., Princeton University, 1958.
- Eliot A. Butler** Assistant Professor of Chemistry (1956)
B.S., Ph.D., California Institute of Technology, 1952, 1955.
- Newbern I. Butt** Associate in Library and Research (1922)
B.S., Utah State Agricultural College, 1915; M.S., Brigham Young University, 1939.
- Edwin J. Butterworth** Assistant Professor of Journalism (1949)
B.A., University of Utah, 1950; M.A., Brigham Young University, 1954.
- Glen H. Calder** Instructor in Engineering Science (1955)
B.S., M.S., Utah State Agricultural College, 1952, 1953.
- JoAnn Calderwood** Instructor in Physical Education (1955)
B.S., Utah State Agricultural College, 1953; M.S., State College of Washington, 1955
- Gaylon L. Caldwell** Associate Professor of Political Science (1951)
B.A., Utah State Agricultural College, 1947; M.A., University of Nebraska, 1948; Ph.D., Stanford University, 1952.
- Sterling G. Callahan** Associate Professor of Secondary Education (1953)
B.A., Brigham Young University, 1937; M.A., George Washington University, 1947; Ed.D., University of Virginia, 1953.
- Eugene E. Campbell** Professor of History (1956)
B.A., M.A., University of Utah, 1939, 1940; Ph.D., University of Southern California, 1952.
- Jennie Campbell** Associate Professor of Elementary Education (1952)
B.S., Brigham Young University, 1928; M.A., Teachers College, Columbia University, 1937.
- *Dorothy Nelson Candland** Associate Professor of Education (1947)
B.S., M.S., Brigham Young University, 1940, 1949; Ed.D., Stanford University, 1956.
(On leave.)
- Ray R. Canning** Associate Professor of Sociology (1947)
B.S., Utah State Agricultural College, 1942; M.S., Brigham Young University, 1948; Ph.D. University of Utah, 1956.
- *Clawson Y. Cannon, Jr.** Assistant Professor of Music (1949)
B.M., Eastman School of Music, University of Rochester, 1948; Diploma, Konservatorium Zurich, 1953; B.A., M.A., Brigham Young University, 1954, 1955. (On leave for further graduate study at New York University.)
- Clawson Y. Cannon, Sr.,** Professor of Animal Husbandry (1956)
B.S., Utah State Agricultural College, 1913; M.S., Ph.D., Iowa State College, 1924, 1927.
- John N. Cannon** Assistant Professor of Mechanical Engineering (1957)
B.S.M.E., M.S., University of Utah, 1952, 1955.
- Kenneth L. Cannon** Professor of Human Development and Family Relationships (1956)
B.S., Brigham Young University, 1935; M.S., Ph.D., Iowa State College, 1948, 1954.
- *Mark W. Cannon** Instructor in Political Science (1955)
B.A., University of Utah, 1949; M.P.E., M.P.A., Harvard University, 1954, 1955.
(On leave as administrative assistant to Representative Henry Aldous Dixon.)
- *Wayne M. Carle** Instructor in Journalism (1956)
B.A., M.Ed., Brigham Young University, 1952, 1956. (On leave for further graduate study at Ohio State University.)
- Ruth C. Carlson** Special Instructor in Clothing and Textiles (1957)
B.S., Utah State Agricultural College, 1954.

- L. Bernice Chapman** Associate Professor of Nursing;
Director of the School of Nursing (1954)
Diploma, Community Hospital, Grinnell, Iowa, 1930; B.S., University of Minnesota,
1935; M.A., Columbia University, 1952.
- A. Norton Chaston** Special Instructor in Electrical Engineering (1957)
B.S., University of Utah, 1955.
- Thomas E. Cheney** Associate Professor of English (1945)
B.S., Utah State Agricultural College, 1930; M.A., University of Idaho, 1936.
- Dean C. Christensen** Associate Professor of Secondary Education (1957)
B.S., M.S., Utah State Agricultural College, 1938, 1948.
- Earl M. Christensen** Assistant Professor of Botany (1949)
B.S., M.S., University of Utah, 1947, 1949; Ph.D., University of Wisconsin, 1954.
- Edward L. Christensen** Associate Professor of Business
Education and Office Management (1953)
B.S., M.S., Ph.D., University of Utah, 1938, 1939, 1953.
- Glen A. Christensen** Assistant Professor of Human Development
and Family Relationships (1958)
B.S., M.S., Utah State Agricultural College, 1954, 1955; Ph.D., Michigan State Univ-
ersity, 1958.
- James J. Christensen** Assistant Professor of Chemical Engineering (1957)
B.S., M.S., University of Utah, 1953, 1956; Ph.D., Carnegie Institute of Technology,
1957.
- Parley A. Christensen** Professor of English (1927)
B.S., Utah State Agricultural College, 1914; M.A., Ph.D., Stanford University, 1925,
1927.
- Ross T. Christensen** Assistant Professor of Archaeology (1952)
B.A., M.A., Brigham Young University, 1943, 1947; Ph.D., University of Arizona,
1956.
- John R. Christiansen** Assistant Professor of Sociology (1957)
B.S., M.S., Utah State Agricultural College, 1949, 1952; Ph.D., University of Wisconsin,
1955.
- Bruce B. Clark** Associate Professor of English (1950)
B.A., University of Utah, 1943; M.A., Brigham Young University, 1948; Ph.D., Uni-
versity of Utah, 1951.
- Harold Glen Clark** Professor of Education; Dean of Adult
Education and Extension Services (1946)
B.S., Brigham Young University, 1928; M.S., University of Southern California, 1934;
Ed.D., George Washington University, 1942.
- Herald R. Clark** Professor of Finance and Banking (1913)
B.A., Brigham Young University, 1918; M.B.A., University of Washington, 1924.
- J. Reuben Clark, III** Assistant Professor of Modern Languages (1941)
B.A., University of Utah, 1934.
- James R. Clark** Assistant Professor of Religion (1938)
B.A., M.A., Brigham Young University, 1936, 1944.
- Marden J. Clark** Assistant Professor of English (1949)
B.A., M.A., Brigham Young University, 1948, 1949; Ph.D., University of Washington,
1957.
- Monroe H. Clark** Associate Professor of Philosophy of Education
and Guidance (1945)
B.A., Columbia University, 1923; M.A., Brigham Young University, 1927.
- Selby G. Clark** Associate Professor of Personnel and Guidance (1953)
B.S., University of Utah, 1948; M.A., University of Minnesota, 1949; Ed.D., State Col-
lege of Washington, 1953.
- A. John Clarke** Professor of Educational Administration (1938)
B.S., M.S., Brigham Young University, 1938, 1942; Ed.D., Colorado University, 1950.

- Morris M. Clinger** Assistant Professor of Speech (1936)
B.A., M.A., Brigham Young University, 1932, 1946.
- Lane A. Compton** Assistant Professor of Physical Science
Education (1953)
B.S., M.S., Ed.D., University of Utah, 1943, 1951, 1955.
- Ivan L. Corbridge** Associate Professor of Economics (1952)
B.A., Utah State Agricultural College, 1946; M.S., University of Chicago, 1948;
Ph.D., Washington State College, 1952.
- Stephen R. Covey** Instructor in Marketing (1957)
B.S., University of Utah, 1953; M.B.A., Harvard University, 1957.
- Cynthia A. Cowan** Instructor in Physical Education (1948)
B.A., University of Utah, 1947; M.S., University of Washington, 1952.
- Soren F. Cox** Instructor in English (1955)
B.A., M.A., Brigham Young University, 1952, 1956.
- Marshall R. Craig** Assistant Professor of English (1953)
B.S., Brigham Young University, 1941; M.A., Columbia University, 1947.
- Lars G. Crandall** Assistant Professor of Business Education
and Office Management (1944)
B.S., M.S., Brigham Young University, 1944, 1945.
- Evan M. Croft** Associate Professor of Business Education
and Office Management (1936)
B.S., Brigham Young University, 1929; M.S., University of Southern California, 1940.
- David M. Crowton** Instructor in Physical Education; Assistant Coach (1937)
B.S., Brigham Young University, 1938.
- Robert M. Cundick** Special Instructor in Music (1957)
B.F.A., M.F.A., Ph.D., University of Utah, 1949, 1950, 1955.
- Brandt B. Curtis** Instructor in Music (1955)
B.A., Brigham Young University, 1953; M.M., Indiana University, 1955.
- T./Sgt. Clayne G. Curtis** Instructor in Air Science (1955)
- Delva Daines** Assistant Professor of Elementary Instruction (1955)
B.S., M.S., Utah State Agricultural College, 1940, 1947; Ed.D., State College of
Washington, 1956.
- Alexander B. Darais** Instructor in Art (1954)
B.S., Brigham Young University, 1948; M.F.A., Claremont Graduate School, 1952.
- J. Kenneth Davies** Assistant Professor of Economics (1953)
B.S., Marquette University, 1945; M.S., Brigham Young University, 1950.
- Allan R. Davis** Instructor in Physical Education; Assistant
Football Coach (1956)
B.S., University of Utah, 1948.
- *C. Edwin Dean** Instructor in Mathematics (1949)
B.S., M.S., Brigham Young University, 1950, 1952. (On leave for further graduate
work at the University of Michigan.)
- Gerrit de Jong, Jr.** Professor of Modern Languages; Dean of the
College of Fine Arts (1925)
B.A., M.A., University of Utah, 1920, 1925; Ph.D., Stanford University, 1934.
- Stanford D. DeMille** Instructor in Business Education and Office
Management (1957)
B.S., Brigham Young University, 1950.
- Fred W. Dixon** Assistant Professor of Physical Education;
Tennis and Golf Coach (1928)
B.S., M.S., Brigham Young University, 1926, 1939.

- Owen G. Dixon Instructor in Physical Education;
Assistant Football Coach (1947)
B.S., Brigham Young University, 1946.
- Mignon Domgaard Instructor in Clothing and Textiles (1954)
B.S., Utah State Agricultural College, 1943; M. of H.E., Oregon State College, 1954.
- David M. Donaldson Assistant Professor of Bacteriology (1955)
B.S., M.S., Ph.D., University of Utah, 1950, 1952, 1954.
- G. Byron Done Professor of Religion (1956)
B.A., University of Utah, 1928; M.A., Ph.D., University of Southern California, 1937,
1939.
- Lester N. Downing Associate Professor of Educational
Research and Services (1954)
B.S., M.S., Utah State Agricultural College, 1947, 1949; Ed.D., Colorado State College
of Education, 1951.
- Roy W. Doxey Assistant Professor of Religion (1948)
B.A., M.A., George Washington University, 1938, 1940.
- Willard B. Doxey Instructor in Economics (1956)
B.S., M.S., University of Utah, 1937, 1947; Ph.D., University of California (Berkeley),
1956.
- Henry W. Drewes Instructor in Psychology (1957)
B.S., M.A., Utah State Agricultural College, 1954, 1954; Ph.D., Cornell University,
1957.
- J. Duane Dudley Instructor in Physics (1956)
B.S., Brigham Young University, 1952; M.A., Rice Institute, 1953.
- Keith E. Duke Assistant Professor of Geography (1956)
B.A., University of California at Los Angeles, 1947; Docteur de l'Univ., Université de
Bordeaux, France, 1950.
- Helen A. Durrant Instructor in Food and Nutrition (1957)
B.S., Brigham Young University, 1953.
- Captain Gerald J. Dye Assistant Professor of Air Science (1957)
B.S., Utah State Agricultural College, 1949; M.S., Miami University, Oxford, Ohio,
1954.
- William G. Dyer Assistant Professor of Sociology (1955)
B.A., M.A., Brigham Young University, 1950, 1952; Ph.D., University of Wisconsin,
1955.
- Don L. Earl Associate Professor of Music (1946)
B.A., M.A., Brigham Young University, 1940, 1947; Ph.D., Indiana University, 1952.
- E. John Eastmond Professor of Physics (1951)
B.A., Brigham Young University, 1937; Ph.D., University of California (Berkeley),
1943.
- *Jefferson N. Eastmond Associate Professor of Educational
Administration (1956)
B.S., M.S., Brigham Young University, 1947, 1948; Ed.D., Teachers College, Columbia
University, 1950. (On leave as administrative assistant in California school system
and post doctoral work at Stanford University.)
- Blaine E. Edlefsen Instructor in Music (1953)
B.A., Brigham Young University, 1952; M. Mus., Eastman School of Music, University
of Rochester, 1953.
- Robert L. Egbert Professor of Educational Psychology (1955)
B.S., M.S., Utah State Agricultural College, 1947, 1948; Ph.D., Cornell University,
1949.
- J. Orval Ellsworth Professor of Religion (1954)
B.S., Utah State Agricultural College, 1917; M.S., Ph.D., Cornell University, 1924,
1926.
- LaMar T. Empey Assistant Professor of Sociology (1955)
B.S., M.S., Brigham Young University, 1951, 1952; Ph.D., State College of Wash-
ington, 1955.

- Paul W. Erekson** Instructor in Civil Engineering (1957)
B.A., B.E.S., Brigham Young University, 1955, 1956.
- Ross S. Esplin** Instructor in English (1953)
B.A., M.A., Brigham Young University, 1947, 1949.
- David L. Evans** Instructor in English (1954)
B.A., Idaho State College, 1948; M.A., University of Utah, 1953.
- Dean B. Farnsworth** Associate Professor of English (1953)
B.A., M.A., University of Utah, 1946, 1947; Ph.D., University of California (Berkeley), 1950.
- Raymond B. Farnsworth** Professor of Agronomy; Acting Dean of
the College of Biological and Agricultural Sciences (1946)
B.S., Brigham Young University, 1937; M.S., Massachusetts State College, 1938; Ph.D., Ohio State University, 1941.
- M. Charles Faux** Instructor in Industrial Management (1957)
B.S., University of Utah, 1956; M.B.A., Harvard Business School, 1954.
- Lawrence Fearnley** Assistant Professor of Mathematics (1957)
B.S., London University, 1953; Ph.D., University of Utah, 1957.
- Paul E. Felt** Assistant Professor of Religion; Coordinator of Student
Organizations (1957)
B.A., Brigham Young University, 1942; M.S., University of Utah, 1954.
- R. Kent Fielding** Assistant Professor of History (1952)
B.S., M.S., Brigham Young University, 1950, 1952; Ph.D., Indiana University, 1957.
- D. Allen Firmage** Associate Professor of Engineering (1955)
B.S.C.E., University of Utah, 1940; M.S., Massachusetts Institute of Technology, 1941.
- *Albert L. Fisher** Assistant Professor of Geography (1954)
B.S., University of Utah, 1951; M.A., Ph.D., Johns Hopkins University, 1952, 1954.
(On leave for post doctoral study.)
- H. Alvah Fitzgerald** Instructor in Religion (1956)
B.S., M.S., Brigham Young University, 1928, 1930.
- Chad J. Flake** Instructor in Library Science (1953)
B.A., Brigham Young University, 1953; M.A., University of Denver, 1955.
- Royce P. Flandro** Assistant Professor of Secondary Education (1953)
B.S., M.S., University of Utah, 1948, 1950; Ed.D., University of Indiana, 1957.
- Harvey J. Fletcher** Associate Professor of Mathematics (1953)
B.S., Massachusetts Institute of Technology, 1944; M.S., California Institute of Technology, 1948; Ph.D., University of Utah, 1954.
- Harvey Fletcher** Professor of Physics (1952)
B.S., Brigham Young University, 1907; Ph.D., Chicago University, 1911; hon. Sc.D., Columbia University, 1935; hon.Sc.D., Kenyon College, 1942; hon.Sc.D., Stevens Institute of Technology, 1942; hon.Sc.D., Case School of Applied Sciences, 1942; hon. Sc.D., University of Utah, 1944; hon.Sc.D., Brigham Young University, 1954.
- Dean K. Fuhrman** Professor of Engineering (1954)
B.S., M.S., Utah State Agricultural College, 1941, 1950; Ph.D., University of Wisconsin, 1952.
- *Glen S. Gagon** Instructor in Education: Instruction (1956)
B.S., M.Ed., Brigham Young University, 1951, 1956. (On leave for further graduate study at University of California.)
- LaVell C. Gamett** Assistant Professor of Industrial Arts (1946)
B.S., Brigham Young University, 1935; M.S., University of Oregon, 1951.
- Charles N. Gardner** Instructor in Mechanical Engineering (1957)
B.S., University of California (Berkeley), 1943.
- Elizabeth L. Gardner** Instructor in Clothing and Textiles and
in Housing and Design (1952)
B.S., Utah State Agricultural College, 1948; M.S., University of California at Los Angeles, 1954.
- John H. Gardner** Associate Professor of Physics (1949)
B.S., Utah State Agricultural College, 1943; M.A., Ph.D., Harvard University, 1947, 1950.

- Crawford Gates** Associate Professor of Music (1948)
B.A., San Jose State College, 1944; M.A., Brigham Young University, 1948; Ph.D., Eastman School of Music, University of Rochester, 1954.
- Jean Patricia Gaty** Assistant Professor of Nursing (1957)
Diploma, Hudson City Hospital Training School for Nurses, Hudson, New York, 1944; B.S., Florida Southern College, 1950; M.A., New York University, 1957.
- David D. Geddes** Assistant Professor of Physical Education and Health (1952)
B.S., M.S., Brigham Young University, 1950, 1952.
- O. Norman Geertsens** Assistant Professor of Physics (1941)
B.S., Brigham Young University, 1930; M.S., University of California at Los Angeles, 1951.
- M. Carl Gibson** Instructor in Modern and Classical Languages (1949)
B.A., M.A., Brigham Young University, 1947, 1949.
- Preston R. Gledhill** Associate Professor of Speech (1947)
Degré Supérieur, La Sorbonne, 1938; B.A., Brigham Young University, 1939; M.A., Louisiana State University, 1940; Ph.D., University of Wisconsin, 1951.
- J. Rex Goates** Professor of Chemistry (1947)
B.S., Brigham Young University, 1942; Ph.D., University of Wisconsin, 1947.
- *Nan Osmund Grass** Instructor in English (1951)
B.A., Brigham Young University, 1930; M.A., Stanford, 1954. (On leave for further graduate study at Columbia University.)
- Jesse W. Grimes** Assistant Professor of Educational Research
and Services (1956)
B.S., Brigham Young University, 1941; M.S., Utah State Agricultural College, 1956.
Ed.D., Harvard University, 1958.
- Capt. Philip L. Grindstaff** Assistant Professor of Air Science (1955)
B.S., Brigham Young University, 1950.
- Lue S. Groesbeck** Instructor in Music (1957)
B.A., Brigham Young University, 1948.
- Stewart L. Grow** Professor of History and Political Science (1947)
B.S., M.S., Brigham Young University, 1935, 1948; Ph.D., University of Utah, 1954.
- Donworth Gubler** Instructor in Modern Languages (1954)
B.A., M.A., Brigham Young University, 1948, 1949.
- Norman Gulbrandsen** Assistant Professor of Music (1951)
B.S., University of Utah, 1942; M.M., Northwestern University, 1948.
- Richard L. Gunn** Associate Professor of Art and Education (1948)
B.S., M.S., Brigham Young University, 1947, 1950; Ed.D., Stanford University, 1955.
- Fred E. Guymon** Instructor in Business Education and Office
Management (1955)
B.S., University of Utah, 1948; M.E., University of Cincinnati, 1951.
- LeRoy R. Hafen** Professor of History (1954)
B.A., Brigham Young University, 1916; M.A., University of Utah, 1919; Ph.D., University of California, 1924; Litt.D., University of Colorado, 1935.
- William J. Hafen** Instructor in Physical Education; Director
of Intramurals (1954)
B.S., Brigham Young University, 1950; M.A., State College of Washington, 1953.
- Richard W. Hales** Associate Professor of Physics (1952)
B.S., Iowa State College, 1946; Ph.D., University of California, 1952.
- Wayne B. Hales** Professor of Physics and Mathematics (1930)
B.A., Brigham Young University, 1916; M.A., University of Utah, 1922; Ph.D., California Institute of Technology, 1926.
- Major David B. Hall** Assistant Professor of Air Science (1955)
B.S., Brigham Young University, 1942.
- H. Tracy Hall** Professor of Chemistry; Director of the
Research Division (1955)
B.S., M.S., Ph.D., University of Utah, 1942, 1943, 1948.

- Merrill J. Hallam** Associate Professor of Agronomy (1952)
B.A., Brigham Young University, 1950; Ph.D., Iowa State College, 1952.
- John R. Halliday** Professor of Music (1936)
B.A., M.A., Brigham Young University, 1935, 1936; Ph.D., Eastman School of Music, University of Rochester, 1941.
- Lawson D. Hamblin** Acquisition Librarian (1948)
B.A., Brigham Young University, 1938; LL.B., Washington College of Law, 1948.
- M./Sgt. Morch O. Hancock** Instructor in Air Science (1957)
B.A., University of Philippines, 1956.
- George H. Hansen** Professor of Geology and Geography (1927)
B.S., Utah State Agricultural College, 1918; M.S., Ph.D., George Washington University, 1925, 1927.
- Harold I. Hansen** Professor of Speech (1952)
B.S., Utah State Agricultural College, 1937; M.A., Ph.D., State University of Iowa, 1940, 1949.
- Ralph W. Hansen** Archivist (1953)
B.A., M.A., Brigham Young University, 1951, 1954.
- Kenneth R. Hardy** Assistant Professor of Psychology (1954)
B.A., M.A., University of Utah, 1948, 1949; Ph.D., University of Michigan, 1954.
- James M. Harris** Assistant Professor of Educational Psychology (1955)
B.S., M.S., Utah State Agricultural College, 1952, 1953; Ph.D., Cornell University, 1955.
- Maurine Harris** Instructor in Nursing (1955)
Diploma, Latter-day Saints Hospital, Salt Lake City, 1948; B.S., University of Utah, 1949.
- Bertrand F. Harrison** Professor of Botany (1929)
B.S., M.S., Brigham Young University, 1930, 1931; Ph.D., University of Chicago, 1937.
- Charles J. Hart** Professor of Recreation and of Physical and Health Education; Assistant to the Dean of the College of Recreation, Physical and Health Education and Athletics (1925)
B.S., Utah State Agricultural College, 1922; M.A., Ed.D., New York University, 1932, 1945.
- Edward L. Hart** Associate Professor of English (1952)
B.S., University of Utah, 1939; M.A., University of Michigan, 1941; D. Phil., Oxford University (England), 1950.
- Milton F. Hartvigsen** Professor of Physical Education; Dean of the College of Recreation, Physical and Health Education and Athletics (1956)
B.S., M.Ed., Utah State Agricultural College, 1930, 1939; Ed.D., University of California at Los Angeles, 1956.
- Floyd E. Haupt** Instructor in Mathematics (1954)
B.S., M.S., University of Arizona, 1947, 1948.
- C. Lynn Hayward** Professor of Zoology (1930)
B.S., M.S., Brigham Young University, 1927, 1931; Ph.D., University of Illinois, 1941.
- Alma Heaton** Assistant Professor of Physical Education and Recreation (1953)
B.S., M.S., Utah State Agricultural College, 1950, 1951.
- Israel C. Heaton** Professor of Recreation (1956)
B.S., M.S., Utah State Agricultural College, 1940, 1941; Re.D., University of Indiana, 1955.
- Richard H. Henstrom** Special Instructor in Speech; Chairman, Off-Campus Instruction (1957)
B.F.A., M.F.A., University of Utah, 1949, 1953.
- Karl P. Herde, Jr.** Instructor in Business Education and Office Management (1957)
B.S., M.S., Brigham Young University, 1949, 1956.

- Armin J. Hill** Professor of Physics; Dean of the College of Physical and Engineering Sciences (1957)
B.S., M.S., Montana State College, 1932, 1938; M.S., Ph.D., California Institute of Technology, 1949, 1950.
- Kenneth L. Hillam** Instructor in Mathematics (1957)
B.S., M.S., University of Utah, 1949, 1956.
- Lynn M. Hilton** Associate Professor of Education; Assistant to the Dean of Adult Education and Extension Services (1953)
B.S., M.S., University of Utah, 1950; Ph.D., University of Chicago, 1952.
- Lehi F. Hintze** Associate Professor of Geology (1955)
B.A., University of Utah, 1941; M.A., Ph.D., Columbia University, 1949, 1951.
- Harry Hodson** Professor of Civil Engineering (1953)
B.Sc., B.E., University of Sydney, 1938, 1940.
- Leona Holbrook** Professor of Physical Education (1937)
B.S., University of Utah, 1929; M.A., Ed.D., Columbia University, 1935, 1950.
- Keith H. Hoopes** Assistant Professor of Animal Husbandry (1957)
B.S., Utah State Agricultural College, 1957; D.V.M., State College of Washington, 1956.
- A. Burt Horsley** Assistant Professor of Philosophy and Religion (1956)
B.A., M.A., Brigham Young University, 1945, 1954; Dd.P., Münster University, 1955; Ph.D., Westphalian Welhelms Universität, Münster, Germany, 1956.
- Frank Horton** Instructor in English (1955)
B.A., Brigham Young University, 1951; M.A., University of Southern California, 1957.
- William A. Hoskisson** Assistant Professor of Bacteriology (1957)
B.S., M.S., Utah State Agricultural College, 1938, 1941; Ph.D., University of Illinois, 1944.
- Robert J. Howell** Associate Professor of Psychology (1952)
B.A., M.A., Ph.D., University of Utah, 1948, 1949, 1951.
- Gordon D. Hovt** Assistant Professor of Physics (1954)
B.S., M.A., Ph.D., University of Michigan, 1939, 1941, 1950.
- Captain Sterling S. Huish** Assistant Professor of Air Science (1957)
B.S., Utah State Agricultural College, 1951.
- DeVerl S. Humphreys** Instructor in Electrical Engineering (1957)
B.S., Brigham Young University, 1955; M.S., University of Utah, 1957.
- Jay B. Hunt** Assistant Professor History and Political Science;
Chairman of Travel Studies, Extension Services (1950)
B.A., M.A., Ph.D., University of Utah, 1947, 1948, 1950.
- Darcus D. Hyde** Instructor in English (1957)
B.A., Brigham Young University, 1956.
- Paul V. Hyer** Instructor in History (1957)
B.A., Brigham Young University, 1951; M.A., University of California, 1953.
- Reed M. Izatt** Assistant Professor of Chemistry (1956)
B.S., Utah State Agricultural College, 1951; Ph.D., Pennsylvania State University, 1954.
- LeRoy E. Jackson** Stockroom Laboratory Assistant in Bacteriology (1956)
B.S., Brigham Young University, 1955.
- Briant S. Jacobs** Professor of English (1946)
B.A., Brigham Young University, 1939; Ph.D., State University of Iowa, 1944.
- Phyllis C. Jacobson** Instructor in Physical Education for Women (1957)
B.S., M.S., Utah State Agricultural College, 1953, 1954.
- M. Wells Jakeman** Associate Professor of Archaeology (1946)
B.A., University of Utah, 1931; M.A., University of Southern California, 1932; Ph.D., University of California, 1938.
- Martha R. Jenny** Associate Professor of Nursing (1952)
Diploma, Presbyterian Hospital School of Nursing, Chicago, 1926; B.S., Teachers College, Columbia University, 1939; M.S., University of Wisconsin, 1946.

- De Lamar Jensen** Instructor in History (1957)
B.A., Brigham Young University, 1952; M.A., Ph.D., Columbia University, 1953, 1957.
- Mary B. Jensen** Instructor in Physical Education and Recreation (1953)
B.A., Park College of Missouri, 1939.
- Vern H. Jensen** Assistant Professor of Personnel and Guidance (1949)
B.S., M.S., Brigham Young University, 1948, 1950; Ed.D., University of Colorado, 1957.
- Edgar M. Jensen** Professor of Education (1927)
B.A., M.A., Brigham Young University, 1916, 1919.
- Gloria D. Jensen** Instructor in Library Science (1954)
B.S., Brigham Young University, 1950; M.S., Columbia University, 1954.
- Ethel Lee Jewell** Instructor in Food and Nutrition (1953)
B.S., University of Utah, 1946.
- J. Lorin Jex** Assistant Professor of Speech (1949)
B.A., M.A., Brigham Young University, 1947, 1950.
- Franz M. Johansen** Instructor in Art (1956)
B.A., Brigham Young University, 1955.
- *Alan P. Johnson** Instructor in Accounting (1955)
B.A., Brigham Young University, 1954; M.B.A., Indiana University, 1955. (On leave for further graduate study.)
- Eldred A. Johnson** Assistant Professor of Accounting (1955)
B.A., Brigham Young University, 1949, 1950; C.P.A., California, 1952.
- *Garth N. Jones** Assistant Professor of Political Science (1953)
B.S., Utah State Agricultural College, 1947; M.S., Ph.D., University of Utah, 1948, 1954. (On leave to accept position as public administration education officer, United States International Cooperative Administration in Indonesia.)
- Jens J. Jonsson** Professor of Electrical Engineering (1953)
B.S.G.E., B.S.E.E., University of Utah, 1944, 1946; M.S.E.E., Ph.D., Purdue University, 1947, 1951.
- Eleanor Jorgensen** Assistant Professor of Clothing and Textiles (1949)
B.S., Brigham Young University, 1946; M.S., Kansas State College, 1954.
- Joseph J. Keeler** Assistant Professor of Music; University Organist (1935)
B.S., M.A., Brigham Young University, 1940, 1950.
- C. Rodney Kimball** Instructor in Physical Education and Health (1937)
B.S., Brigham Young University, 1955.
- Edwin R. Kimball** Professor of Physical Education (1935)
B.S., Brigham Young University, 1926; M.S., University of Southern California, 1935; Ed.D., University of Oregon, 1955.
- Alma W. King** Assistant Professor of Religion; Dean of Students' Staff (1956)
B.S., M.S., Brigham Young University, 1930, 1936.
- Hattie M. Knight** Coordinator for Reader Services, Library (1941)
B.S., Brigham Young University, 1941; B.S., in L.S., University of Denver, 1943; M.S., in L.S., George Peabody College for Teachers, 1951.
- Marion Kohler** Assistant Professor of Nursing (1954)
Diploma, Salt Lake General Hospital, 1943; B.S., Brigham Young University, 1951; M.N., University of Washington, 1957.
- Eleanor S. Kondo** Instructor in Food and Nutrition (1956)
B.A., Brigham Young University, 1954.
- Harold W. Kopp** Associate Professor of Physical Education;
Head Football Coach (1956)
B.S., Northeastern University, 1939.
- Mary A. Krider** Assistant Professor of Education (1954)
B.A., University of Nebraska, 1927; Ed.M., University of Oklahoma, 1940.
- Jean T. Kunz** Instructor in Human Development and Family
Relationships (1957)
B.S., University of Idaho, 1940; M.A., George Peabody College, 1956.

- Don H. Larsen** Associate Professor of Bacteriology (1952)
B.S., Brigham Young University, 1940; M.A., University of Nebraska, 1942; Ph.D., University of Utah, 1950.
- Vernon W. Larsen** Assistant Professor of Sociology (1952)
B. A., M. A., Brigham Young University, 1949, 1950; Ph.D., Cornell University, 1957.
- Clinton F. Larson** Associate Professor of English (1947)
B.A., M.A., University of Utah, 1943, 1947; Ph.D., University of Denver, 1956.
- Gustive O. Larson** Assistant Professor of Church History and
Philosophy (1954)
B.A., M.A., University of Utah, 1920, 1926.
- Harold R. Laycock** Assistant Professor of Music (1949)
B.A., M.A., Brigham Young University, 1937, 1947.
- Ralph G. Laycock** Assistant Professor of Music (1953)
B.A., Brigham Young University, 1941; M.S., Juilliard School of Music, N.Y.C., 1948.
- Robert L. Layton** Assistant Professor of Geography (1954)
B.S., M.S. University of Utah, 1951, 1952.
- Robert L. Leake** Instructor in Physical Education (1956)
B.S., M.S., Brigham Young University, 1955, 1957.
- Harold W. Lee** Professor of Modern Languages (1937)
B.A., M.A., Brigham Young University, 1938, 1940; Ph.D., Stanford University, 1946.
- Stella Dixon Lewis** Instructor in Economics and Management
of the Home (1956)
B.S., Brigham Young University, 1938.
- Wesley P. Lloyd** Professor of Philosophy of Education;
Dean of Students (1935)
B.S., M.S., Brigham Young University, 1927, 1934; Ph.D., University of Chicago, 1937.
- Howard D. Lowe** Professor of Finance and Banking (1947)
B.S., M.A., Utah State Agricultural College, 1945, 1948; C.P.A., Utah, 1949; D.B.A., Indiana University, 1957.
- Daniel H. Ludlow** Associate Professor of Religion (1955)
B.S., Utah State Agricultural College, 1946; M.S., Indiana University, 1953; Ed.D., Columbia University, 1955.
- Ross "J" McArthur** Assistant Professor of Industrial Arts (1956)
B.S., M.S., Utah State Agricultural College, 1949, 1953; Ed.D., University of Missouri, 1955.
- Velma J. McBride** Instructor in Nursing (1956)
Diploma, San Bernardino Valley College of Nursing, 1950; B.S., University of California at Los Angeles, 1954.
- Cleo McCracken** Instructor in Personnel and Guidance (1954)
B.S., Utah State Agricultural College, 1937; M.A., Syracuse University, 1951.
- Lyle H. McIff** Assistant Professor of Accounting (1957)
B.S., Brigham Young University, 1948; M.B.A., University of Texas, 1951; C.P.A., Texas, 1953, Utah, 1954.
- John E. McKendrick** Assistant Professor of English (1953)
B.A., M.A., University of Utah, 1942, 1949.
- Lynn A. McKinlay** Special Instructor in Speech (1955)
Certificate, Post Graduate Certificate, Pasadena Community Playhouse, College of Theatre Arts, 1936, 1937.
- Max E. McKinnon** Instructor in Industrial Arts (1957)
B.S., M.S., Utah State Agricultural College, 1949, 1954.
- Kent H. McKnight** Assistant Professor of Botany (1947)
B.S., M.S., Brigham Young University, 1948, 1952; Ph.D., University of Michigan, 1955.
- Delbert H. McNamara** ... Assistant Professor of Mathematics and Physics (1955)
B.S., Ph.D., University of California (Berkeley), 1947, 1950.

- Melvin P. Mabey** Assistant Professor of History and Political Science (1955)
B.S., M.A., Brigham Young University, 1947, 1953; D. Phil., Oxford University Eng-
land), 1955.
- Harold S. Madsen** Instructor in English (1957)
B.A., University of Utah, 1953.
- Truman G. Madsen** Assistant Professor of Philosophy and Religion (1957)
B.S., M.S., University of Utah, 1950, 1951; Ph.D., Harvard University, 1957.
- Georgia Maeser** Assistant Professor of Elementary Education (1927)
B.S., Brigham Young University, 1928; M.A., Columbia University, 1938.
- Milton Marshall** Professor of Physics (1919)
B.A., Brigham Young University, 1918; Ph.D., University of Chicago, 1924.
- Daniel L. Martino** Associate Professor of Music (1956)
B.S., M.A., University of Minnesota, 1938, 1945.
- Conan E. Mathews** Associate Professor of Art (1956)
B.A., College of Idaho, 1936; M.F.A., University of Utah, 1950.
- Merlin J. Mecham** Associate Professor of Speech (1954)
B.A., Brigham Young University, 1948; M.S., Utah State Agricultural College, 1949;
Ph.D., Ohio State University, 1954.
- Richard L. Meibos** Instructor in Chemistry (1955)
B.A., Brigham Young University, 1952.
- J. Keith Melville** Assistant Professor of Political Science (1957)
B.A., University of Utah, 1947; M.A., University of California, 1949; Ph.D., University
of Utah, 1956.
- Evan J. Memmott** Instructor in Education (1955)
B.S., M.S., Utah State Agricultural College, 1950, 1952; M.S., Indiana University,
1953.
- Seymour Mikkelsen** Instructor in Animal Husbandry (1956)
B.S., Brigham Young University, 1948.
- Martin L. Miller** Assistant Professor of Physics and Mathematics (1942)
B.A., M.A., Brigham Young University, 1942, 1950.
- Albert O. Mitchell** Professor of Speech and Dramatic Arts (1956)
B.S., M.S., University of Utah, 1933, 1935; Ph.D., University of Wisconsin, 1938.
- Olive K. B. Mitchell** Instructor in English (1947)
B.A., University of Arizona, 1932; M.A., Brigham Young University, 1934.
- J. C. Moffitt** Professor of Education (1953)
B.S., M.S., Brigham Young University, 1926, 1929; Ph.D., University of Chicago, 1940.
- J. Weldon Moffitt** Assistant Professor of Psychology (1953)
B.S., Brigham Young University, 1949; M.S., University of Utah, 1950; Ph.D., Uni-
versity of Illinois, 1952.
- Darrel J. Monson** Associate Professor of Electrical Engineering (1956)
B.S., University of Utah, 1943; M.S., University of California (Berkeley), 1952.
- *Samuel C. Monson** Associate Professor of English (1952)
B.S., Utah State Agricultural College, 1941; M.A., Ph.D., Columbia University, 1948,
1953. (On leave for post doctoral study.)
- Alonzo J. Morley** Professor of Speech (1928)
B.A., M.A., Brigham Young University, 1925, 1931; Ph.D., University of Iowa, 1935.
- Jeannette Morrell** Instructor in English (1956)
B.A., M.A., University of Utah, 1933, 1935.
- A. Reed Morrill** Professor of Educational Administration (1948)
B.S., M.S., Brigham Young University, 1928, 1937; Ed.D., University of Oregon, 1948.
- Lawrence Morris** Professor of Animal Husbandry (1952)
B.S.A., University of Arizona, 1925; M.S., Texas A & M, 1928; Ph.D., Louisiana State
University, 1938.
- Sadie O. Morris** Professor of Food and Nutrition (1957)
B.S., M.S., Utah State Agricultural College, 1921, 1922; Ph.D., Columbia University,
1933.

- E. Lorene Munk Instructor in Library Science (1956)
B.S., Utah State Agricultural College, 1952; M.S., University of Southern California, 1953.
- J. Richard Murdock Assistant Professor of Botany (1952)
B.S., M.S., Brigham Young University, 1949, 1951; Ph.D., State College of Washington, 1957.
- William V. Nash Instructor in Library Science (1957)
B.A., Brigham Young University, 1950; M.S., University of Illinois, 1957.
- Glen T. Nelson Associate Professor of Economics (1954)
B.S., M.S., Utah State Agricultural College, 1942, 1948; Ph.D., University of Illinois, 1950.
- Capt. Keith J. Nelson Assistant Professor of Air Science (1954)
B.S., Utah State Agricultural College, 1950.
- K. LeRoi Nelson Associate Professor of Chemistry (1956)
B.S., Utah State Agricultural College, 1948; Ph.D., Purdue University, 1952.
- Hugh W. Nibley Professor of History and Religion (1946)
B.A., University of California at Los Angeles, 1934; Ph.D., University of California, 1938.
- Henry J. Nicholes Associate Professor of Zoology (1946)
B.A., Brigham Young University, 1935; M.S., Ph.D., University of Wisconsin, 1939, 1941.
- Joseph K. Nicholes Professor of Chemistry (1933)
B.A., Brigham Young University, 1916; M.A., Stanford University, 1924.
- T./Sgt. Alfred C. Nielsen Instructor in Air Science (1954)
- Fred K. Nielsen Instructor in Mathematics (1956)
B.A., M.A., Harvard University, 1954, 1955.
- Eve Nielson Catalog Librarian (1949)
B.S., Utah State Agricultural College, 1945.
- Howard C. Nielson Associate Professor of Economics (1957)
B.S., University of Utah, 1947; M.S., University of Oregon, 1949; M.B.A., Ph.D., Stanford University, 1956, 1957.
- Quentin R. Nordgren Assistant Professor of Music (1955)
B.A., M.A., Brigham Young University, 1942, 1950; Ph.D., Indiana University, 1955.
- Clinton L. Oaks Associate Professor of Marketing (1957)
B.A., Brigham Young University, 1948; M.B.A., Ph.D., Stanford University, 1950, 1955.
- Keith R. Oakes Associate Professor of Educational
Philosophy and Programs (1957)
B.S., M.S., Utah State Agricultural College, 1940, 1948; Ed.D., University of Southern California, 1954.
- J. Lloyd Olpin Assistant Professor of Mathematics (1955)
B.S., Brigham Young University, 1925; M.S., Colorado University, 1938.
- Ernest L. Olson Assistant Professor of English (1953)
B.A., M.A., University of Utah, 1948, 1949.
- Mary M. Takaki Oniki Instructor of Nursing (1957)
Diploma, Kuakini Hospital, Honolulu, Oahu, T.H., 1950; B.S., University of Utah, 1954.
- John E. Ord Instructor in Education: Instruction (1957)
B.S., Utah State Agricultural College, 1940; M.S., University of Utah, 1949.
- Scott G. Orrock Instructor in Personnel and Guidance (1955)
B.A., M.A., Brigham Young University, 1952, 1953.
- Joseph Owens Curator in Geology (1957)
B.S., Brigham Young University, 1957.
- Kathryn B. Pardoe Assistant Professor of Speech (1947)
B.A., Brigham Young University, 1934.

- Clyde A. Parker** Assistant Professor of Personnel and Guidance (1953)
B.S., M.S., Brigham Young University, 1952; Ph.D., University of Minnesota, 1957.
- Mary H. Parsons** Instructor in Nursing (1955)
B.S., Utah State Agricultural College, 1953.
- *Robert C. Patch** Instructor in Religion (1949)
B.A., University of New Mexico, 1945; M.Th., Brigham Young University, 1949. (On leave for further graduate work at University of California at Los Angeles.)
- John W. Payne** Assistant Professor of Sociology (1947)
B.A., M.A., Brigham Young University, 1936, 1948.
- Glenn Pearson** Instructor in Religion (1951)
B.S., Utah State Agricultural College, 1949; M.A., Brigham Young University, 1951.
- Dale C. Perry** Assistant Professor of Civil Engineering (1957)
B.S.C.E., University of Utah, 1953; M.S.C.E., University of California (Berkeley), 1956.
- Dean A. Peterson** Associate Professor of Business Education
and Office Management (1942)
B.S., Brigham Young University, 1938; M.S., University of Southern California, 1942.
- Hugh W. Peterson** Associate Professor of Chemistry (1927)
B.A., M.A., Brigham Young University, 1916, 1928; Ph.D., State University of Iowa, 1936.
- Marion C. Pfund** Professor of Food and Chemistry; Dean of
the College of Family Living (until July 31, 1958) (1954)
B.S., Simmons College, 1919; M.A., Vassar College, 1921; Ph.D., Yale University, 1928.
- William Revell Phillips** Assistant Professor of Geology (1957)
B.S., M.S., Ph.D., University of Utah, 1950, 1951, 1954.
- Guy Pierce** Instructor in Industrial Arts (1953)
B.S., Brigham Young University, 1953; M.S., University of Minnesota, 1956.
- *Richard D. Poll** Professor of History and Political Science (1948)
B.A., M.A., Texas Christian University, 1938, 1939; Ph.D., University of California, (Berkeley), 1948. (On leave for post doctoral research.)
- J. Perry Polson** Assistant Professor of Business Education
and Office Management (1952)
B.S., M.S., University of Utah, 1947, 1952.
- A. Smith Pond** Professor of Economics; Dean of the Graduate School (1937)
B.A., University of Utah, 1926; Ph.D., Northwestern University, 1942.
- Blaine M. Porter** Professor of Human Development and
Family Relationships (1955)
B.S., M.A., Brigham Young University, 1947, 1949; Ph.D., Cornell University, 1952.
- Margaret Schow Potter** Assistant Professor of Clothing and Textiles (1946)
B.S., Brigham Young University, 1939; M.S., Oregon State College, 1949.
- Norma Potter** Instructor in Nursing (1953)
Diploma, Latter-day Saints Hospital, Salt Lake City, 1931; B.S., University of Utah, 1950.
- Virginia B. Poulson** Assistant Professor of Homemaking Education (1950)
B.S., Brigham Young University, 1931; M.Ed., Colorado A. & M., 1955.
- Victor W. Purdy** Periodicals Librarian (1954)
B.S., Brigham Young University, 1952; M.S., Columbia University, 1955.
- Ellis T. Rasmussen** Instructor in Religion (1951)
B.S., M.A., Brigham Young University, 1942, 1951.
- M./Sgt. Ernest L. Ray** Instructor in Air Science (1955)
- Jesse W. Reeder** Assistant Professor of History and
Political Science (1952)
B.S., M.S., Utah State Agricultural College, 1934, 1937; Ph.D., Cornell University, 1952.

- Howard T. Reid** Professor of Personnel and Guidance;
Assistant Dean of Students (1953)
B.A., Brigham Young University, 1940; M.S., Ed.D., University of Southern California, 1947, 1949.
- Ernest F. Reimschuessel** Instructor in Horticulture and
Horticultural Specialties (1942)
B.A., M.S., Brigham Young University, 1940, 1951.
- Leonard W. Rice** Professor of English; Dean of College of Humanities
and Social Sciences (1942)
B.A., Brigham Young University, 1941; M.A., Ph.D., University of Washington, 1943, 1950.
- Naoma Rich** Coordinator for Technical Services, Library (1937)
B.S., Brigham Young University, 1931; Certificate in Library Science, Riverside Library Service School, 1932.
- Owen S. Rich** Instructor in Radio Speech (1950)
B.S., Brigham Young University, 1950; M.A., University of Southern California, 1953.
- Russell R. Rich** Associate Professor of Religion (1953)
B.S., Utah State Agricultural College, 1936; M.A., Brigham Young University, 1949; Ed.D., University of Wyoming, 1955.
- Grant S. Richards** Associate Professor of Animal Husbandry (1945)
B.S., M.S., Utah State Agricultural College, 1940, 1942.
- Jed J. Richardson** Instructor in Speech (1955)
B.S., M.S., Utah State Agricultural College, 1950, 1955.
- Dean Rickenbach** Instructor in Economics (1957)
B.S., Brigham Young University, 1954; M.A., Stanford University, 1957.
- Eldin Ricks** Assistant Professor of Religion (1949)
B.S., Brigham Young University, 1941; M.A., University of Southern California, 1949.
- Chauncey C. Riddle** Assistant Professor of Religion and Philosophy (1952)
B.S., Brigham Young University, 1947; M.A., Columbia University, 1951.
- J. Keith Rigby** Assistant Professor of Geology (1953)
B.S., M.S., Brigham Young University, 1948, 1949; Ph.D., Columbia University, 1952.
- Robert E. Riggs** Assistant Professor of Political Science (1955)
B.A., M.A., University of Arizona, 1952, 1953; Ph.D., University of Illinois, 1955.
- Burton W. Robinson** Associate Professor of Clinical Psychology (1955)
B.S., M.S., Utah State Agricultural College, 1951; Ph.D., Purdue University, 1954.
- Donald W. Robinson** Assistant Professor of Mathematics (1956)
B.S., M.A., University of Utah, 1948, 1952; Ph.D., Case Institute of Technology, 1956.
- Clarence F. Robison** Assistant Professor of Physical and Health
Education; Head Track Coach (1948)
B.S., Brigham Young University, 1949; M.S., University of Michigan, 1954.
- Lewis M. Rogers** Assistant Professor of Religion (1955)
B.S., Utah State Agricultural College, 1943; M.A., Ph.D., University of Southern California, 1952, 1956.
- R. Max Rogers** Professor of Modern Languages (1945)
B.A., M.A., Brigham Young University, 1940, 1942; Ph.D., Stanford University, 1951.
- Ralph L. Rollins** Associate Professor of Civil Engineering (1956)
B.S., M.S., Utah State Agricultural College, 1941, 1949; Ph.D., Iowa State College, 1954.
- Antone K. Romney** Professor of Educational Psychology; Assistant
Dean of the College of Education (1945)
B.S., M.S., Brigham Young University, 1933, 1934; Ed.D., Stanford University, 1947.
- Lawrence W. Sardoni** Associate Professor of Music (1945)
B.A., M.A., Brigham Young University, 1935, 1946.

- Ruth P. Schindler** Assistant Professor of Nursing (1957)
B.A., Whittier College, 1929; Diploma, San Bernardino Valley College of Nursing, 1937; M.Ed., Columbia University, 1957.
- Sherman B. Sheffield** Instructor in History; Chairman, On-Campus Adult Education (1957)
B.S., Brigham Young University, 1952; M.S., University of Southern California, 1954.
- *Morris A. Shirts** Assistant Professor of Secondary Education (1952)
B.A., M.A., Brigham Young University, 1947, 1950; Ed.D., Indiana University, 1952.
(On leave with United States Operations Mission in Iran.)
- R. Phil Shumway** Assistant Professor of Animal Husbandry (1949)
B.S., Utah State Agricultural College, 1947; M.S., University of Minnesota, 1949.
- Elbert R. Simmons** Instructor in Zoology and Entomology (1956)
B.S., Utah State Agricultural College, 1941; M.A., State University of Iowa, 1943.
- John M. Simonsen** Associate Professor of Mechanical Engineering (1954)
B.S.M.E., University of Utah, 1950; M.S.M.E., Ph.D., Purdue University, 1952, 1955.
- Arthur D. Slater** Assistant Professor of Personnel and Guidance (1956)
B.S., Brigham Young University, 1948; M.S.W., Tulane University, 1950.
- Lyman F. Smart** Assistant Professor of English (1953)
B.A., Idaho State College, 1950; M.A., University of New Mexico, 1952.
- Dorothy Smiley** Instructor in Nursing (1957)
Diploma, Broadlawns Hospital, Des Moines, Iowa, 1953; B.S., State University of Iowa, 1957.
- Carol T. Smith** Special Collections Librarian (1949)
B.A., Brigham Young University, 1940.
- Jay M. Smith, Jr.** Instructor in Accounting (1957)
B.S., Brigham Young University, 1953; C.P.A., 1953.
- Oliver R. Smith** Professor of Journalism (1938)
B.A., Brigham Young University, 1938; Ph.D., State University of Iowa, 1951.
- Richard L. Smith** Professor of Business Management (1947)
B.A., University of Utah, 1946; M.B.A., Northwestern University, 1947; C.P.A., Illinois, 1947; C.P.A., Utah, 1948; D.C.S., Harvard Graduate School of Business Administration, 1956; D.B.A., Indiana University, 1957.
- Robert J. Smith** Professor of Accounting (1949)
B.S., Brigham Young University, 1948; M.B.A. Northwestern University, 1949; C.P.A., Illinois, 1949; C.P.A., Utah, 1950; D.B.A., Indiana University, 1957.
- Wilford E. Smith** Associate Professor of Sociology (1948)
B.A., University of Utah, 1943; M.A., Brigham Young University, 1948; Ph.D. University of Washington, 1952.
- Rulon N. Smithson** Instructor in Modern Languages (1955)
B.A., M.A., Brigham Young University, 1954, 1955.
- Richard L. Snow** Assistant Professor of Chemistry (1957)
B.S., Ph.D., University of Utah, 1953, 1957.
- H. Wayne Soffe** Assistant Professor of Physical Education (1938)
B.S., M.S., Brigham Young University, 1938, 1941; D.P.E., Indiana University, 1955.
- Irene Osmond Spears** Associate Professor of English (1936)
B.A., Brigham Young University, 1929; M.A., Ph.D., Stanford University, 1934, 1942.
- Sidney B. Sperry** Professor of Old Testament Languages and Literature;
Director of Graduate Studies in Religion (1932)
B.A., University of Utah, 1917; M.A., Ph.D., University of Chicago, 1926, 1931.
- Russell Stansfield** Assistant Professor of Business Education
and Office Management (1947)
B.S., M.S., Brigham Young University, 1940, 1949.
- *Homer G. Statham** Instructor in English (1955)
B.A., Mercer University, 1947; M.A., Brigham Young University, 1955. (On leave for further graduate study.)

- Floyd C. (Tally) Stevens** Instructor in Physical Education;
Assistant Football Coach (1956)
B.S., University of Utah, 1949.
- Helen T. Stevenson** Instructor in Nursing (1957)
Diploma, John Hopkins Hospital, Baltimore, Maryland, 1947; B.S., University of
Utah, 1957.
- Royal B. Stone** Associate Professor of Youth Leadership (1955)
B.S., University of Utah, 1926.
- Lorraine Storey** Instructor in Human Development and
Family Relationships (1956)
B.S., M.S., Utah State Agricultural College, 1953, 1956.
- Dee Leon Storrs** Instructor in Library Science (1957)
B.S., Brigham Young University, 1953; M.S., University of Washington, 1957.
- Robert E. Struthers** Instructor in Speech and Dramatic Arts (1953)
B.S., Utah State Agricultural College, 1949; M.S., Brigham Young University, 1953.
- Howard C. Stutz** Assistant Professor of Botany (1953)
B.S., M.S., Brigham Young University, 1940, 1951; Ph.D., University of California
(Berkeley), 1956.
- Albert D. Swensen** Associate Professor of Chemistry (1947)
B.A., M.A., Brigham Young University, 1937, 1938; Ph.D., Louisiana State University,
1941.
- Beulah S. Swensen** Special Instructor in Business Education and
Office Management (1956)
B.S., Brigham Young University, 1932.
- Merlynn Swensen** Instructor in Library Science (1958)
B.A., B.L.S., University of California (Berkeley), 1952, 1953.
- Russel B. Swensen** Professor of History (1933)
B.A., Brigham Young University, 1926; M.A., Ph.D., University of Chicago, 1931,
1934.
- Joseph N. Symons** Professor of Sociology (1953)
B.S., M.S., Utah State Agricultural College, 1927, 1932; Ph.D., University of Chicago,
1944.
- Orea B. Tanner** Associate Professor of English (1938)
B.A., Brigham Young University, 1932; M.A., Columbia University, 1953.
- Vasco M. Tanner** Professor of Zoology and Entomology (1925)
B.A., Brigham Young University, 1915; M.A., University of Utah, 1920; Ph.D., Stan-
ford University, 1925.
- Wilmer W. Tanner** Associate Professor of Zoology
and Entomology (1949)
B.S., M.A., Brigham Young University, 1936, 1937; Ph.D., University of Kansas, 1949.
- Charles Taylor** Associate Professor of Psychology (1954)
B.Mus., A.B., Ph.D., Syracuse University, 1940, 1948, 1954.
- Ethelyn Peterson Taylor** Assistant Professor of Business Education
and Office Management (1946)
B.S., Brigham Young University, 1937; M.A., Stanford University, 1949.
- H. Darrel Taylor** Associate Professor of Modern Languages (1948)
B.A., M.A., University of Arizona, 1947, 1948; Ph.D., University of Illinois, 1956.
- Weldon J. Taylor** Professor of Marketing; Dean, College of
Commerce (1937)
B.S., Brigham Young University, 1934; M.B.A., Harvard Graduate School of Business
Administration, 1937; Ph.D., Graduate School of Business Administration, New
York University, 1955.
- J. Kenneth Thatcher** Chairman of B.Y.U.-Ricks Adult Education
Center, Extension Services (1956)
B.S., University of Utah, 1925; M.Ed., University of Idaho, 1936.

- Elvis B. Terry** Instructor in Music (1957)
B.S., M.S., Brigham Young University, 1933, 1950.
- Douglas H. Thayer** Instructor in English (1957)
B.A., Brigham Young University, 1955.
- Robert K. Thomas** Assistant Professor of English (1951)
B.A., Reed College, 1947; M.A., University of Oregon, 1949.
- Woodruff C. Thomson** Assistant Professor of English (1950)
B.A., M.A., University of Utah, 1938, 1949.
- Lucile Markham Thorne** Circulation Librarian (1950)
B.A., M.A., Brigham Young University, 1929, 1956.
- Dale Tingey** Instructor in Religion (1957)
B.S., University of Utah, 1952; M.S., Brigham Young University, 1955; Ph.D., Washington State College, 1957.
- Max D. Tolbert** Instructor in Physical Education; Assistant
Football Coach (1955)
B.S., Brigham Young University, 1952.
- James R. Tolman** Reference Librarian (1957)
B.A., Utah State Agricultural College, 1949; M.S., University of Illinois, 1951.
- Lucile Layton Trost** Instructor in Clothing and Textiles (1956)
B.S., Brigham Young University, 1940; M.S., Utah State Agricultural College, 1956.
- Jack B. Trunnell** Dean of the College of Family Living
(effective August 31, 1958) (1958)
B.A., Brigham Young University, 1942; M.D., University of Utah, 1945.
- Glen H. Turner** Assistant Professor of Art (1947)
B.S., M.A., Brigham Young University, 1940, 1948.
- Rodney Turner** Instructor in Religion (1956)
B.A., M.A., Brigham Young University, 1949, 1953.
- L. Elliott Tuttle** Assistant Professor of Geography (1936)
B.S., M.S., Brigham Young University, 1938, 1948.
- S. Lyman Tyler** Associate Professor of History; Director of Libraries (1952)
B.S., Ph.D., University of Utah, 1949, 1951.
- Clarence Tyndall** Assistant Professor of Education; Chairman of
the Bureau of Audio-Visual Aids (1946)
B.S., Brigham Young University, 1941; M.A., Stanford University, 1952.
- Quentin E. Utley** Instructor in Education: Instruction (1957)
B.S., Brigham Young University, 1940.
- Lee B. Valentine** Assistant Professor of Modern Languages (1938)
B.A., M.A., Brigham Young University, 1939, 1948.
- Jay L. Van Noy** Instructor in Physical Education; Head
Baseball Coach (1957)
B.S., Utah State Agricultural College, 1950.
- Leo P. Vernon** Associate Professor of Chemistry (1954)
A.B., Brigham Young University, 1948; Ph.D., Iowa State College, 1951.
- Josie S. Vincent** Special Instructor in Housing and Design (1957)
B.S., Utah State Agricultural College, 1939.
- J. Homer Wakefield** Assistant Professor of Music (1949)
B.S., M.S., M.A., Brigham Young University, 1924, 1933, 1950.
- Lulu Wallace** Instructor in Physical Education (1956)
B.S., Utah State Agricultural College, 1954.
- Jean Anne Waterstradt** Instructor in English (1945)
B.A., Brigham Young University, 1945; M.A., University of Southern California, 1955.

- Arthur R. Watkins** Professor of Modern Languages (1952)
B.A., M.A., Brigham Young University, 1941, 1942; Ph.D., Stanford University, 1948.
- Ray Watters** Assistant Professor of Health Education (1957)
B.S., M.S., Utah State Agricultural College, 1948, 1950.
- Stanley H. Watts** Associate Professor of Physical Education;
Head Basketball Coach (1947)
B.S., Brigham Young University, 1938.
- *Newell B. Weight** Assistant Professor of Music (1948)
B.A., M.A., Brigham Young University, 1938, 1946. (On leave for further graduate study at University of California at Los Angeles.)
- Kurt Weininger** Instructor in Music (1956)
Music Diplomas, Academy of Music and Arts, Vienna, Austria, 1951, 1953.
- Dale H. West** Assistant Professor of English (1947)
B.A., Brigham Young University, 1940; M.A., University of Southern California, 1955.
- Donna M. Weston** Instructor in Nursing (1956)
Diploma, Latter-day Saints Hospital, Salt Lake City, 1954; B. S., University of Utah, 1954.
- Carl K. White** Instructor in Speech and Dramatic Arts (1957)
B.S., M.S., University of Utah, 1947, 1954.
- J. Morgan White** Instructor in Accounting (1953)
B.S., Brigham Young University, 1951; C.P.A., Utah, 1953.
- Harry E. Wickes** Instructor in Mathematics (1957)
B.S., M.Ed., Brigham Young University, 1950, 1954.
- Ray T. Wilcox** Assistant Professor of Education: Instruction (1957)
B.S., M.Ed., Brigham Young University, 1951, 1954; Ed.D., University of California (Berkeley), 1957.
- William L. Wilkes, Jr.** Instructor in Music (1957)
B.A., Brigham Young University, 1952, Ph.D., University of Southern California, 1956.
- Ernest J. Wilkins** Associate Professor of Modern Languages (1953)
B.A., Brigham Young University, 1947; M.A., Ph.D., Stanford University, 1949, 1954.
- Frank R. Wilkinson** Assistant Professor of Psychology (1955)
B.A., University of Utah, 1948; M.A., University of Hawaii, 1950; Ph.D., Michigan State University, 1955.
- S./Sgt. William K. Willden** Instructor in Air Science (1956)
- Annette Wilson** Instructor in Nursing (1956)
Diploma, Thomas D. Dee Memorial Hospital, Ogden, Utah, 1951; B.S., University of Utah, 1954.
- Arnold Wilson** Instructor in Civil Engineering (1957)
B.S., Brigham Young University, 1957.
- M. Lyman Wilson, Jr.** Instructor in Industrial Management (1956)
B.A., Brigham Young University, 1954; M.B.A., Stanford University, 1956.
- Marguerite L. Wilson** Instructor in Education: Instruction (1956)
B.S., University of Utah, 1948; M.A., San Francisco State College, 1955.
- Warren B. Wilson** Associate Professor of Art and Education (1954)
B.S., Utah State Agricultural College, 1943; M.F.A., State University of Iowa, 1949.
- John H. Wing** Assistant Professor of Chemistry (1931)
B.S., M.S., Brigham Young University, 1926, 1934.
- Wendell H. Wiser** Assistant Professor of Chemical Engineering (1955)
B.S., Ph.D., University of Utah, 1949, 1952.
- Alan R. Witbeck** Instructor in Physical Education (1955)
B.S., M.S., Brigham Young University, 1952, 1954.
- Glena D. Wood** Instructor in English (1952)
B.A., Brigham Young University, 1936; M.A., University of Kentucky, 1949.

- Stephen L. Wood** Assistant Professor of Zoology and Entomology (1956)
B.S., M.S., Utah State Agricultural College, 1946, 1948; Ph.D., University of Kansas, 1953.
- Lael J. Woodbury** Associate Professor of Speech (1954)
B.S., Utah State Agricultural College, 1952; M.A., Brigham Young University, 1953; Ph.D., University of Illinois, 1954.
- Asahel D. Woodruff** Professor of Educational Psychology; Dean of the College of Education (1949)
B.S., M.S., Brigham Young University, 1936, 1937; Ph.D., University of Chicago, 1941.
- Ralph Woodward** Assistant Professor of Music (1955)
University of Idaho, 1940; M.M., Cincinnati Conservatory of Music, 1948.
- *Golden L. Woolf** Professor of Educational Administration (1934)
B.A., M.A., Brigham Young University, 1934, 1936; Ed.D., University of California, 1940. (On leave with United States Operations Mission in Iran.)
- David H. Yarn, Jr.** Assistant Professor of Theology and Philosophy; Director of Undergraduate Studies in Religion (1950)
B.A., Brigham Young University, 1946; M.A., Columbia University, 1949.
- Karl E. Young** Professor of English (1930)
B.A., M.A., Oxford University (England), 1930, 1934.

(Names of faculty members on leave are marked with asterisks (*) in the departmental faculty listings.)

SPECIAL INSTRUCTORS OR LECTURERS

General Authorities of the Church of Jesus Christ of Latter-day Saints

- Florence Beck, B.A.**, Consultant Instructor in Family Living
- Archibald F. Bennett, M.A.**, Special Instructor in Religion
- Jacob Bos**, Special Instructor in Music
- Rulon Brough**, Special Instructor in Machine Accounting
- Adine Bradley**, Special Instructor in Music
- Merrill Bushnell, M.B.A.**, Special Instructor in Industrial Management
- Ina Lou Cheney, B.A.**, Special Instructor in Music
- Lathair H. Curtis, B.A.**, Special Instructor in Journalism
- Glen L. Enke, B.S.** Special Instructor in Housing and Design
- George W. Fitzroy**, Special Instructor in Piano
- Carl Fuerstner**, Special Instructor in Piano
- Barclay Gardner, M.S.**, Special Instructor in Economics
- Paul Harmon, M.S.**, Special Instructor in Marketing
- Lucille N. Jensen, B.S.**, Special Instructor in Human Development and Family Relationships
- Phil D. Jensen, B.S., C.L.U.**, Special Instructor in Insurance
- Lee Knell, B.S., B. Arch.**, Special Instructor in Art
- Arminta Mathews, B.S.**, Special Instructor in Music
- Craig McNeil, B.A.**, Special Instructor in English
- Lorna Neilsen, B.A.**, Special Instructor in English
- Joseph E. Nelson, B.S., L.L.B.**, Special Instructor in Business Law
- Elmer E. Nelson**, Special Instructor in Piano
- Kenneth Pace, B.S.**, Special Instructor in Marketing
- Ford Paulson**, Special Instructor in Agricultural Economics
- Lynn Taylor, B.A.**, Special Instructor in Art and Housing and Design
- Richard M. Taylor, B.S., L.L.B.**, Special Instructor in Business Law
- Irene Thomson, B. S.**, Special Instructor in Food and Nutrition
- Helen W. Wakefield, B.S.**, Consultant Instructor in Family Living

Kay Williams, M.B.A., Special Instructor in Economics
Margaret Woodward, B.A., Special Instructor in Music

EXTENSION SERVICES — SPECIAL INSTRUCTORS OR LECTURERS

Verl P. Allman, B.S., M.S., Special Instructor in Spanish
Leland E. Anderson, B.S., M.A., Special Instructor in Religion
Willard A. Aston, B.S., Special Instructor in Religion
Theron H. Atkinson, B.A., M.A., Special Instructor in Library Science
J. Edwin Baird, B.S., LL.B., Special Instructor in Religion
B. Harrison Barrus, B.S., M.Ed., Special Instructor in Religion
Beth H. Bastian, B.S., M.S., Special Instructor in Economics and Home Management
Hugh C. Bennion, B.S., M.S., Ed.D., Special Instructor in Educational Admin.
Lowell L. Bennion, B.A., Ph.D., Special Instructor in Religion
Ruth H. Biddulph, B.A., Special Instructor in English
James L. Bradley, B.S., M.S., Special Instructor in Religion
Melvin R. Brooks, B.A., M.A., Special Instructor in Religion
Claude J. Burtenshaw, B.S., M.S., Ph.D., Special Instructor in Political Science
Elsie Carroll, B.S., M.A., Special Instructor in English
W. Henry Chace, Special Instructor in Genealogy
Jay B. Christensen, B.S., M.S., Special Instructor in Religion
Henry E. Christiansen, Special Instructor in Genealogy
Pearson H. Corbett, B.S., M.S., Special Instructor in Religion
H. Clyde Davis, B.S., M.S., Special Instructor in Religion
Burnett B. Ferguson, B.A., M.A., Special Instructor in Religion
George H. Fudge, Special Instructor in Genealogy
David E. Gardner, Special Instructor in Genealogy
Montchesney Gottfredson, B.A., M.A., Special Instructor in Religion
Spencer Grow, B.S., M.S., Special Instructor in Finance and Banking
Stanley Gunn, B.S., M.S., Special Instructor in Religion
Charles D. Harland, Special Instructor in Genealogy
H. Bartley Heiner, B.S., M.S., Special Instructor in Religion
E. Preston Hyatt, B.S., M.S., Special Instructor in Geology
Howard B. Jackson, B.A., LL.B., Special Instructor in Political Science
Carl Herbert Jacob, B.A., M.A., Special Instructor in Religion
Charles W. Johnson, B.A., Special Instructor in Finance and Banking
Raymond F. Jones, B.A., Special Instructor in Genealogy
R. Lee Kenner, B.A., M.A., Special Instructor in Religion
Alfred H. Kopp, B.A., M.A., Special Instructor in Religion
T. Edgar Lyon, B.S., M.A., Special Instructor in Religion
Rulon S. McCarrey, B.S., M.S., Special Instructor in Sociology
Calvin D. McOmber, Jr., B.A., Special Instructor in Religion
Fred K. Miller, B.S., Special Instructor in Education and Industrial Arts
Marriner D. Morrell, LL.B., Special Instructor in Education
Norma Morrell, B.S., Special Instructor in Human Development and Family Relationships
Carl Olsen, B.A., M.A., Special Instructor in Art
Berkley H. Parkinson, M.A., Special Instructor in Physical Education
Oliver H. Parson, B.S., M.A., Special Instructor in Art
Hugh James Phillips, B.A., M.A., Special Instructor in Religion

Albert A. Pieper, B.A., M.S., Special Instructor in English
Benjamin J. Rencher, B.S., Ph.D., Special Instructor in Agriculture
Howard E. Salisbury, B.A., Special Instructor in English Lit. and Languages
Arthur Silvester, B.S., M.S., Special Instructor in Psychology
Jay L. Slaughter, B.A., B.S., Special Instructor in Music
Frank Smith, Special Instructor in Genealogy
J. Grant Stevenson, B.A., M.A., Special Instructor in Genealogy
Ezra S. Stucki, B.S., M.S. Special Instructor in Educational Administration
Grant R. Thomas, B.S., M.S., Special Instructor in Marketing
Shirley Thomas, B.S., Special Instructor in Food and Nutrition
Clyde D. Tidwell, B.S., M.Ed., Special Instructor in Religion
William O. Tolman, B.S., Special Instructor in Genealogy
Nicholas Van Alfen, B.A., M.A., Special Instructor in Religion
Robert Van Drimmelen, B.S., M.S., Special Instructor in Educational Administration
Arthur D. Wengreen, B.A., M.A., Special Instructor in Religion
Herbert C. Wright, B.A., M.A., Special Instructor in Religion

THE STAFF OF THE LABORATORY SCHOOLS

Avard A. Rigby Director of the Laboratory Schools; Associate Professor of Secondary Education (1957)
 B.S., Brigham Young University, 1938; Ed.D., University of Utah, 1955.
John K. Crnkovic Assistant Director of the Laboratory Schools for Curriculum and Teaching; Assistant Professor of Education: Instruction (1957)
 B.A., Willamette University, 1930; M.A., University of Michigan, 1940; Ed.D., Arizona State College (Tempe), 1956.
John W. Tucker Assistant Director of the Laboratory Schools for Operations; Assistant Professor of Educational Administration (1957)
 B.A., Brigham Young University, 1951; M.A., Arizona State College, 1952; Ed.D., Harvard University, 1957.

The Elementary School

Forrest R. Allred Fifth Grade (1957)
 B.S., Brigham Young University, 1955.
Jesse R. Brown Fifth Grade and Elementary Methods (1956)
 B.S., M.Ed., Brigham Young University, 1949, 1956.
D. June Carlisle Second Grade and Elementary Methods (1956)
Lillian A. Christensen Second Grade and Elementary Methods (1950)
 B.S., University of Utah, 1938; M.S., Brigham Young University, 1957.
Hazel Cook Clark Kindergarten and Elementary Methods (1952)
 B.S., University of Utah, 1938.
Welsford H. Clark Sixth Grade and Elementary Methods (1956)
 B.S., Brigham Young University, 1956.
Bertha Davidson Fourth Grade and Elementary Methods (1950)
 B.S., M.S., Brigham Young University, 1950, 1954.
Henrietta A. Hogan First Grade (1957)
 B.S., Utah State Agricultural College, 1952.
Elva Killian Miller Third Grade and Elementary Methods (1955)
 B.S., Brigham Young University, 1947.

- Mima Rasband First Grade and Elementary Methods (1952)
B.S., M.S., Brigham Young University, 1937, 1950.
- Sadie Rogers Fourth Grade and Elementary Methods (1956)
B.S., M.S., University of Utah, 1941, 1953.
- Carma L. Sandberg Librarian (1957)
B.A., Brigham Young University, 1932.
- J. Kenneth Williams Sixth Grade and Elementary Methods (1956)
B.S., Brigham Young University, 1948.

The Secondary School

- *Verl Allman Biological Sciences (1950)
B.S., M.S., Brigham Young University, 1948, 1952. (On leave for further graduate study.)
- Wallace E. Allred Mathematics (1956)
B.S., M.Ed., Brigham Young University, 1956, 1957.
- Grant D. Bendixsen Mathematics, Core-Curriculum (1954)
B.S., M.S., Brigham Young University, 1949, 1953.
- June E. Berry Librarian (1948)
B.S., Brigham Young University, 1947; M.S., University of Utah, 1952.
- Melvin R. Brooks Religion (1955)
B.A., M.A., University of Utah, 1944, 1955.
- Grant M. Bushman Physical Education, Athletics (1953)
B.S., Brigham Young University, 1948.
- Faye J. Buttle Speech, Core-Curriculum (1951)
B.A., M.Ed., M.A., Brigham Young University, 1927, 1953, 1954.
- Julia A. Caine History, Social Studies (1941)
B.S., Brigham Young University, 1925; M.A., Colorado State College of Education, 1950.
- Joyce Chournos Physical Education (1956)
B.S., Utah State Agricultural College, 1953.
- Max C. Golightly Speech (1956)
B.A., Brigham Young University, 1950.
- *Omar Hansen Mathematics and Physical Sciences (1957)
B.S., Brigham Young University, 1947. (On leave for graduate study.)
- Anna B. Hart English (1939)
B.S., Utah State Agricultural College, 1922; M.A., University of Southern California, 1933; M.Ed., George Peabody College for Teachers, 1949.
- Betty Jo Hatton Home Economics (1956)
B.S., Brigham Young University, 1956.
- Ray W. Hellberg Art and Publications (1957)
B.A., M.S., Brigham Young University, 1955, 1957.
- Ross C. Hilton Industrial Arts (1957)
B.S., Utah State Agricultural College, 1951.
- Don L. McConkie Core-Curriculum, Social Studies (1953)
B.S., M.S., Brigham Young University, 1927, 1942.
- Parke Madson Commercial Subjects (1955)
B.S., Brigham Young University, 1951; M.B.A., Indiana University, 1954.
- Winston Mercer English, French (1947)
B.A., Brigham Young University, 1942.
- Richard L. Pope English (1955)
B.S., M.S., Brigham Young University, 1954, 1956.
- LeRoy E. Porter Counselor (1957)
B.S., Brigham Young University, 1954.

- L. Grant Shields** Music (1954)
B.A., Brigham Young University, 1949.
- E. Donald Snow** Physical Education, Athletics (1950)
B.S., M.S., Brigham Young University, 1946, 1954.
- M. LeRoy Sparks** Commercial Subjects (1944)
B.S., Utah State Agricultural College, 1928.
- Fredrick N. Webb** Vocal Music (1948)
B.A., M.A., Brigham Young University, 1933, 1954.
- June G. Whiteford** English (1955)
B.A., Michigan State Normal College, 1942; Certificate in Library Science, Gonzaga University, 1947.

Objectives

... seek ye out of the best books words of wisdom:
seek learning even by study, and also by faith.

—Doctrine and Covenants, Sec. 88, v. 118

David O. McKay, President of the Church of Jesus Christ of Latter-day Saints, has stated that the following should be the objectives of a student at the Brigham Young University:

1. Become aware of one's own ignorance and gain humility in contemplating how infinite God's creations are.
2. Increase one's knowledge, selecting those facts and truths which will be most valuable and realizing that exact and definite knowledge is always of the greatest possible value and importance to every individual who has the moral courage to use it rightly.
3. Learn that acquisition of knowledge will result only from personal effort, not from superficial study or shirking.
4. Realize the responsibility one has, because of free agency, of individual choice. The opportunity for rising above the plane of animal existence is open to all who will choose it.
5. Come to a knowledge that the purpose of life is not mere existence or pleasure or fame or wealth, but the perfection of humanity through individual achievement under the guidance of God's inspiration.

It has been the aim of the University to encourage students to realize these objectives, objectives closely allied to, and derived from, the basic philosophy of Mormonism: man, the son of God, is a free agent with unlimited possibilities for eternal development under God's guidance; a never-ending search for truth and for an understanding of the truth should be among the activities of those who aspire to perfection.

Brigham Young University

Past and Present

History of the University

Founding and Philosophy. Brigham Young University was established pursuant to a deed of trust executed by Brigham Young, President of the Church of Jesus Christ of Latter-day Saints, on October 16, 1875. That deed expressly set forth that the "pupils shall be instructed in . . . such branches as are usually taught in an academy of learning," and also "in the Old and New Testaments, the Book of Mormon and the Book of Doctrine and Covenants."

A group of seven persons appointed by President Young comprised the first Board of Trustees. They were Abraham O. Smoot, President of Utah Stake of the Church, which embraced all of Utah County, William Bringham of Springville, Leonard E. Harrington of American Fork, and Wilson H. Dusenberry, Martha J. Coray, Myron Tanner and Harvey H. Cluff of Provo, all prominent members of Utah Stake.

At a meeting November 22, 1875, the Board of Trustees organized the Academy. At that time the Timpanogos Branch of the University of Deseret had just been discontinued, and it was too late in the year to arrange a complete school year. Consequently the board decided to hold two preliminary terms of the Brigham Young Academy. Warren N. Dusenberry, who had been principal of the Timpanogos Branch, was selected to become principal of the Academy. After conducting the first preliminary term, which ended April 15, 1876, he resigned to practice law.

Ten days later, President Brigham Young, acting for the Board of Trustees, requested Dr. Karl G. Maeser, a convert to the Church from Germany, to come to his office. "Brother Maeser," said the President, "I have another mission for you. We have been considering the establishment of a Church school, and are looking around for a man—a man to take charge of it. You are the man, Brother Maeser. We want you to go to Provo to organize and conduct an Academy to be established in the name of the Church—a Church School."

A few days later, Dr. Maeser called at the office of President Young and said, "President Young, I am ready to go to Provo. What are my instructions?"

"Only this," replied the President. "I want you to remember that you ought not to teach even the alphabet or the multiplication tables without the spirit of God. That is all. God bless you. Goodbye."

Dr. Maeser accepted this all-embracing charge, believing that the ultimate good in education could be summed up in the words of the Master: "Be ye perfect, even as your Father in Heaven is perfect." In one of his memorable sermons, Dr. Maeser stated the real purpose of the school by saying, "Not by bread alone, neither for bread alone does man live. There are higher objectives yet to be attained, other truths to be learned, and greater work to be done." Years later, consistent with that philosophy, the school adopted as its motto this revelation of the Lord: "The Glory of God is Intelligence."*

*Doctrine and Covenants, Section 93.

Administration of Karl G. Maeser. Karl G. Maeser served as principal of the Academy from April 24, 1876, to January 4, 1892, a period of 16 years.

He had received intensive training in the excellent German schools of his time. He was a graduate of the Dresden Gymnasium and of the normal schools of Friedrichstadt, Germany. At the time of his conversion to the Church, he was Vice-Director of the Budich Educational Institute at Dresden.

Neither Warren N. Dusenberry nor Dr. Karl G. Maeser had much academic assistance at the beginning of school. When Dr. Maeser began his teaching at Brigham Young Academy, he was principal and the sole teacher of the twenty-nine students, most of them from Utah County.

The old Lewis Building, which stood on the corner of Third West and Center Streets, was the first home of the Brigham Young Academy. This building was later described by Justice George Sutherland of the United States Supreme Court, one of the Academy's first students, as being a "structure without beauty or grace or any other aesthetic feature calculated to invite a second look . . . It consisted of one large room and a stage—both so utterly bare and gloomy as to make inappropriate any form of entertainment except tragedy."

By 1882 this building was found to be inadequate for the needs of the school, and additional rooms were built from funds provided by A. O. Smoot, Harvey H. Cluff, Myron Tanner, and W. H. Dusenberry. However, this structure was entirely destroyed by fire January 27, 1884. Temporary quarters were obtained, and the school continued with the loss of only one day of school. During the summer of 1884 arrangements were made with Z.C.M.I. for the use of the upper floor and part of the lower floor of its warehouse on University Avenue.

Members of the Board of Trustees were appointed by Brigham Young until his death in 1877, when this responsibility fell upon his heirs.

The transition of the Brigham Young Academy into the University of the Church has been marked by periods of great financial distress. Brigham Young died before he had provided for the endowment of the institution. This left the school without any assured source of income.

In the early days of the school, when no funds for the budget could be found, the Board actually considered closing the Academy. It was then that Professor Maeser and his faculty showed their loyalty by teaching for anything they could get, including agricultural products, which were accepted from students in lieu of cash tuition.

President A. O. Smoot of Utah Stake was equally loyal. In the winter of 1887, to bolster up a shrinking enrollment, he asked each member in attendance at a stake priesthood meeting to pay the tuition of at least one student at the Academy. On leaving before the close of the meeting, he told the priesthood assembled that they might name the sum he should pay and he would abide by the decision. Members of the Academy faculty readily responded to the call. One faculty member, who was teaching his first year at a salary of twenty dollars per month, paid a quarter's tuition for one student.

On June 8, 1888, President Wilford Woodruff organized a General Board of Education of the Church, consisting of nine members. This Board directed the activities of the school, but the power of appointment of the Board of Trustees still remained with the heirs of Brigham Young until July 18, 1896, when, by the adoption of the Articles of Incorporation for the University, the right of appointment was granted to the First Presidency of the Church through the consent of the heirs of Brigham Young. By this action, the Church assumed the indebtedness of the institution and accepted the responsibility of maintaining Brigham Young University.

On January 4, 1892, the school was moved to what is now known as the Education Building, the first structure built especially for the University. Much

of the \$75,000 it cost was made available through the personal credit of President A. O. Smoot, a member of the Board of Trustees at that time.

Dr. Maeser's administration will be remembered primarily because of his masterful teaching. His legacy to the Church school system consisted of three ideals: (1) the acquirement of intelligence by academic studies; (2) the development of character; and (3) a reverence for the revealed word of God, together with a living testimony of the divinity of the message of the Church which he represented. He often stated that "no infidel" would go out from his school, and it is doubtful whether any did. His sermons were classics which lived with his students throughout their lives. He was the great spiritual architect of the school.

Administration of Benjamin Cluff. Benjamin Cluff, a former student of Karl G. Maeser, served as president from January 4, 1892, to December 23, 1903. He was one of the first native Utahns to earn a college degree, having received it from the University of Michigan in 1890. He influenced many young men and women to go to larger universities in pursuit of higher learning. Some of them later became teachers at the Brigham Young University.

His administration was effective in changing the school from one which was still largely a normal school, with a very small college department, to the University.

After 1892, President Cluff asked the Church authorities to provide another building to house the growing student body properly. As the Church was not prepared to furnish the money, Reed Smoot, chairman of the Executive Committee of the Board, took the initiative and secured a contribution of one thousand dollars each from Wilford Woodruff, George Quayle Cannon, Joseph Fielding Smith, Reed Smoot, Jesse Knight, Charles Edwin Loose, Alfred William McCune, Amanda Inez Knight, Stephen L. Chipman, and Jesse William Knight. The cost of the building exceeded ten thousand dollars, but Reed Smoot subscribed the additional amount to cover the expense. It was named College Building. Dedication was held in connection with commencement week in 1898.

The financial panic of 1893 further intensified the school's financial difficulties. Some of the real estate sold to clear part of the indebtedness had to be repossessed by the school, and \$30,000 was supplied by the Church to be applied on its debts. President A. O. Smoot underwrote large notes for the school to keep it operating. On his death, the trustee-in-trust of the Church, in the interest of the heirs of the estate, agreed to underwrite all notes of the Academy bearing President Smoot's endorsement.

President Cluff was instrumental in founding an alumni association in June of 1893. He gave encouragement to student organization and activity. Early in his administration two school papers were begun; athletic sports such as football, basketball, and track were encouraged; and the school colors, blue and white, were chosen. He established the first summer school and added new departments and laboratories.

In 1894 the title of the head of Brigham Young Academy was changed from "Principal" to "President," and in 1903 the school became Brigham Young University.

In 1900 President Cluff sponsored a South American expedition to engage in archaeological study of Book of Mormon sites. While he was in South America, Acting President George H. Brimhall asked the authorities for a Church normal training school building with a gymnasium on the upper floor. Jesse Knight, a member of the Board of Trustees, volunteered a contribution of \$15,000. The board promptly authorized the project. Other contributions were solicited with good results. The total cost of the Training School and Gymnasium Building was \$35,000. The dedication service was held February 17, 1902.

Administration of George H. Brimhall. On April 16, 1904, after having acted as President of the University while Benjamin Cluff was in South America, George H. Brimhall was appointed President of the Brigham Young University. Joseph B. Keeler was appointed his first counselor and Edwin S. Hinckley his second counselor.

Dr. Brimhall also was a former student of Dr. Karl G. Maeser. He was a dynamic speaker and a great moulder of character. He continually stressed the fact that the primary purpose of the school was to make better Latter-day Saints.

The Missionary and Preparatory Building, later known as the Art Building and now as B.Y. High, was dedicated October 26, 1904. It cost \$13,000, of which amount \$9,000 was apportioned to four stakes: Utah, Alpine, Nebo and Wasatch.

In 1904, the students and faculty began negotiations for the purchase of seventeen acres of land known generally as Temple Hill. This land, purchased from Provo City about 1907 at a total cost of \$1,000, was the beginning of the upper campus. A survey of the land purchased showed that about one and one-half acres at the point of the hill was not included in the deed given by Provo City. The students and faculty members of the school voluntarily raised an additional \$1,000 to pay for this land.

This purchase provided a place for the Maeser Memorial Building, the cornerstone of which was laid on Founder's Day, 1909. It was ready for occupancy the fall term of 1911. The structure and furnishings cost \$130,000; the Knight family contributed \$65,000, and other members of the alumni some \$50,000. The remainder of the cost was met through the sale of Blue Bench Irrigation Company Bonds owned by the school.

The Women's Gymnasium was erected in 1913; the Mechanic Arts Building in 1919.

On December 21, 1914, the late Jesse Knight made an endowment to the University of one hundred thousand dollars in six per cent bonds. The interest payments on these bonds, together with the payments on bonds which have matured, have been placed at interest, and the cash credit of this account now represents approximately twice the amount of the original endowment.

During President Brimhall's administration graduate work was introduced and the first master's degrees were conferred. The school spirit was furthered by the organization of the students into a student body. Printing of the school yearbook, *The Banyan*, was begun, and a huge white "Y" was placed on the mountainside east of Provo.

Dr. Brimhall served until July 1, 1921, a period of 17 years.

Administration of Franklin S. Harris. Franklin S. Harris, a former student of the institution under President George H. Brimhall, was selected to succeed his former President. Dr. Harris had received his Ph.D. degree from Cornell University in 1911 and had served as an instructor in the Juarez Academy and Cornell University, and as professor of agronomy for the Utah Experiment Station, director of the School of Agricultural Engineering and Mechanical Arts, and director of the Utah Experiment Station at the Utah State Agricultural College. He had a world-wide reputation as a scientist.

Dr. Harris became President July 1, 1921, and served until June 30, 1945, a period of 24 years, the longest term of any President. During his administration, academic gains of great significance were made. The University was organized into five colleges: Applied Sciences, Arts and Sciences, Commerce, Education, and Fine Arts; and the Division of Religion and the Extension Division were established. The Graduate School was formally organized and a dean of the Graduate School appointed. The Heber J. Grant Library was completed in 1925, the Y Stadium in 1929, and during the last ten years of his administration a building program was begun which has been accelerating ever since.

It was President Harris who first envisioned the present expanded upper campus of the University and indeed who made it possible by his extensive purchasing of lands surrounding the original upper campus. It was also during his administration that all members of the Quorum of the Twelve became members of the Board of Trustees.

In 1935 two stories were added to the Mechanic Arts Building to provide additional classrooms and laboratories. The name was changed to George H. Brimhall Building. During the year 1935-36, a Stadium House on the west side of the football field was erected. In 1937-38, Allen Hall, a men's dormitory, and in 1938-39, Amanda Knight Hall, a women's dormitory, were constructed. These accommodate 90 and 130 students, respectively. The construction of both buildings was financed by borrowing from the Knight Endowment Fund. The Joseph Smith Building was begun in 1939 and completed in 1941 as a project of the Church Welfare program. During 1943 the University acquired the National Youth Administration Building on the east part of the campus for use of the Mechanic Arts Department. In 1944, because of the acute housing problem created by the building of the Geneva Steel plant, it was equipped to serve as a temporary dormitory for women.

Administration of Howard S. McDonald. Howard S. McDonald, the next president of the University, served from July 1, 1945, to October 30, 1949. Before being appointed to this position he had served as assistant superintendent of schools in San Francisco and later as superintendent of Salt Lake City schools.

Under his leadership the school experienced a major expansion. From 1946 to 1948 the temporary women's dormitory at the southeast end of the campus was remodeled into what is now known as Social Hall, containing a large dance floor and classrooms and offices used by the Music Department. During the same period Knight-Mangum Hall, a four-level structure adjoining the Social Hall on the west, was constructed. This building provides housing and feeding accommodations for 280 women. Because of the enlarged, post-war student body, student housing facilities were greatly increased. In cooperation with the Federal Works program, temporary housing, known as Wymount Village, was constructed in 1946-47 near the eastern edge of the campus for 200 married veterans and their wives and for 350 single veterans. Also under the Federal Works program of aid to education, temporary-type buildings were provided in 1946-47, consisting of the Physical Plant Building, Public Relations Building, North Building, Industrial Arts Building, Wymount Dining Hall, and University Press. In 1948 the Speech Department was moved to the Upper Campus and housed in temporary buildings. Here the Brigham Young University broadcasting station, KBYU, is located. A central heating plant costing \$200,000 was constructed in 1946.

Under President McDonald's direction the Eyring Science Center was begun and almost completed. Called by many educators the finest and most modern science building between the Mississippi and the Pacific Coast, it has four stories and contains approximately 150,000 square feet of floor space (practically the equivalent of the space in all of the other buildings of the University previously constructed). It is equipped with the finest facilities for study and research. Moreover, it is proof of the Church's sincere belief that there is nothing inconsistent between scientific truth and the teachings of the Gospel.

During his administration the planning and architectural drawings of buildings for the University were assigned to a University architect. The buildings and grounds were placed under the direction of a superintendent of buildings and grounds.

In the post-war era of expanding collegiate enrollments, the Brigham Young University, under his direction, expanded at a much faster rate than many other universities of the country. The faculty was increased to meet the new need. The Graduate School and the Student Counseling Service were both re-

organized. As was true with his predecessors, he upheld and perpetuated the spiritual ideals of the University's academic life.

Administration of Christen Jensen. Dr. Christen Jensen acted as president of the Brigham Young University during 1939-40 (when Dr. Harris spent a year in Iran) and again from November 1, 1949, until the early part of 1951. His two periods of administration were characterized by an emphasis on scholarship and a meticulous observance of proper University standards. In an era of dynamic university problems, President Jensen directed an administration characterized by academic and administrative stability and sound judgment. Under his direction the Eyring Science Center was completed and dedicated on October 23, 1950; the plans for the new George Albert Smith Fieldhouse were approved, a drive for funds conducted, and its construction practically completed at a cost of over \$1,000,000. It provides, in addition to athletic and physical education facilities, offices for faculty members in the College of Recreation, Physical and Health Education, and Athletics. The Fieldhouse has a capacity of 10,650 persons.

Administration of Ernest L. Wilkinson. In 1950 Dr. Wilkinson was selected by the Board of Trustees as the new president. He began his period of service in February, 1951.

After graduating from Brigham Young University, he was graduated from George Washington University Law School, where he received his LL.B. degree. He then attended Harvard Law School, where he obtained the degree of Doctor of Juridical Science. After graduation he accepted an appointment to teach at the New Jersey Law School as Professor of Law. Soon thereafter he was invited to become an associate in the New York City law firm of which the Hon. Charles Evans Hughes, later Chief Justice of the Supreme Court of the United States, was the senior member. Later, organizing his own firm in Washington, D. C., Dr. Wilkinson achieved a national reputation as a lawyer, climaxed by obtaining judgments of \$32,000,000 for the Ute Indians, the largest judgments ever entered in the United States Court of Claims against the United States.

As a churchman, he has served as a bishop in the New York Stake and as a member of the stake presidency in the Washington Stake, and he has represented the Church on the National Commission for Army and Navy Chaplains, which approves chaplains appointed to the armed forces of the United States.

In 1951, a Reserve Officer Training Corps unit of the Air Force was activated at the Brigham Young University. The officers of this unit have been selected by the Secretary of Air, with the approval of the President of the University. This unit is composed entirely of students regularly enrolled at the Brigham Young University, and the same standards of conduct and living are required of them as of other students at the University. In accordance with an agreement with the Federal government, a building was completed in October, 1952, which serves as a permanent rifle range for the R.O.T.C.

During his seven years of service, the University has experienced over 100 per cent increase in enrollment. In 1953, the University became the largest church-related institution of higher education in the United States. The faculty has witnessed an even larger proportionate increase in numbers, and the five colleges, one school, and two divisions previously comprising the University have been increased to nine colleges, two schools, and two divisions: Colleges of Biological and Agricultural Sciences, Commerce, Education, Family Living, Fine Arts, General, Humanities and Social Sciences, Physical and Engineering Sciences, and Recreation, Physical and Health Education and Athletics; Graduate School and School of Nursing; and Adult Education-Extension Services and Division of Religion.

Throughout his administration President Wilkinson has insisted upon ever higher standards of scholarship. Under his direction the curriculum has undergone extensive revision to eliminate sub-university or duplicating courses, to strengthen existing courses, and to add courses needed in the expanding college program.



Air view of Upper Campus



Students Enjoy Weekly Devotionals



Karl G. Maeser Memorial Building

Science Library Study Area



Heber J. Grant Library Building





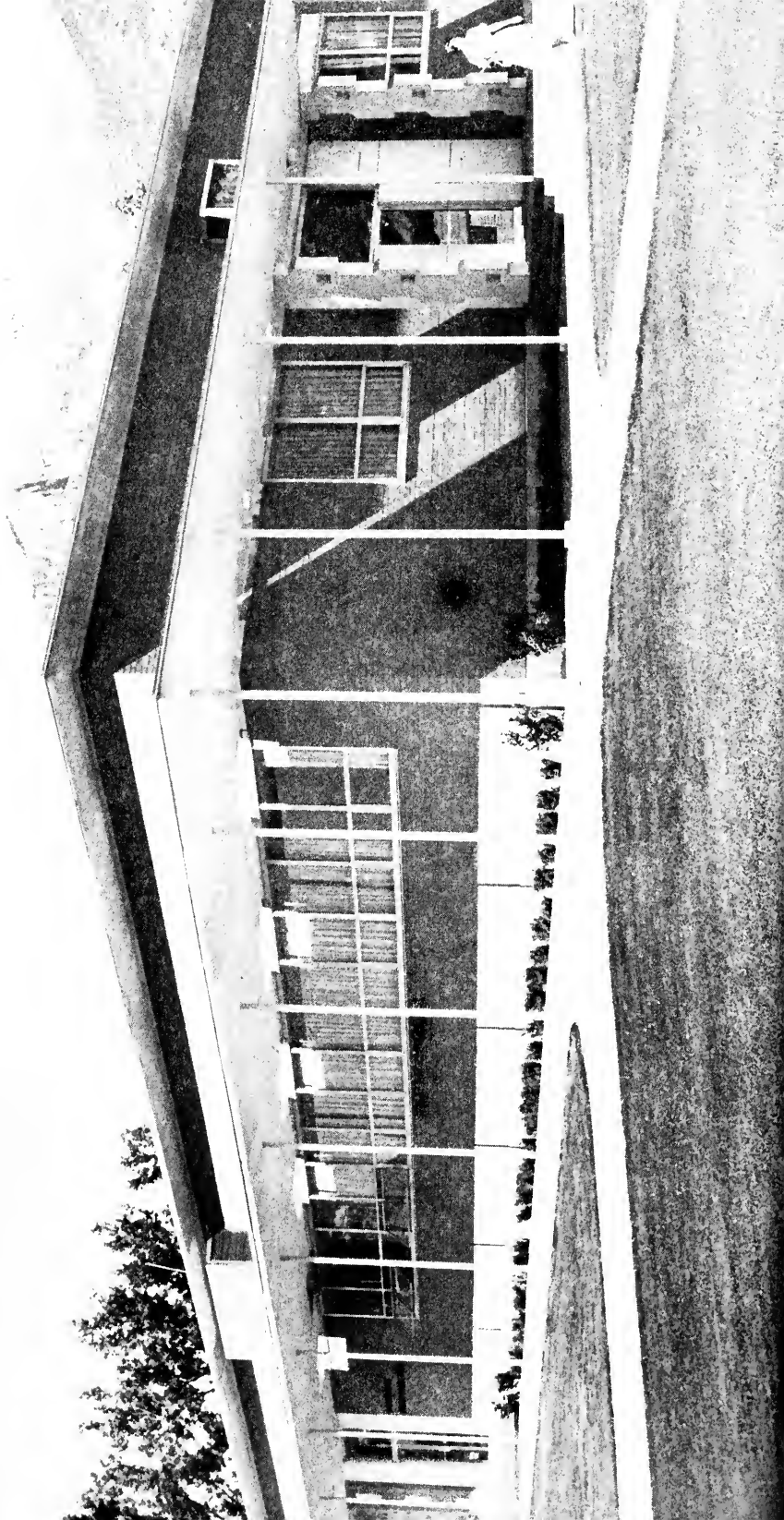
David O. McKay Building





Carl F. Eyring Physical Sciences Center

Herald R. Clark Student Service Center



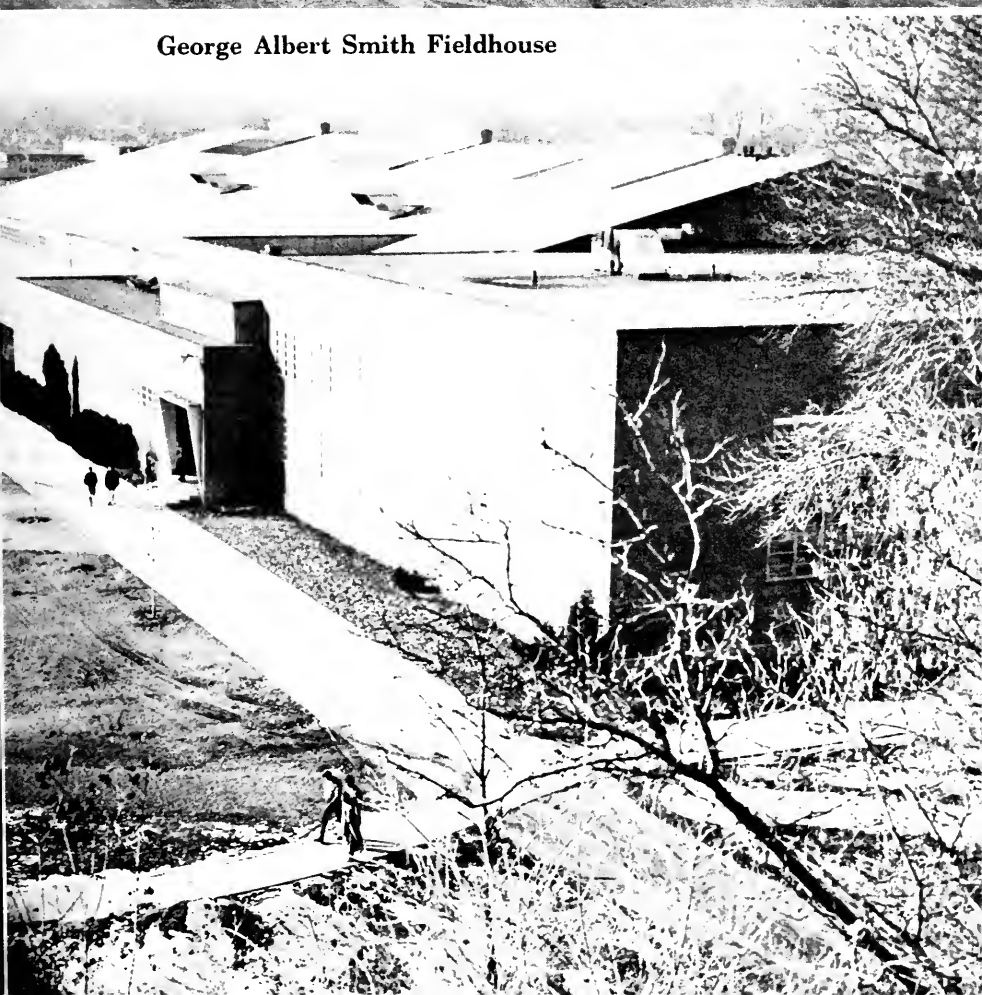






Women's Physical Education Class

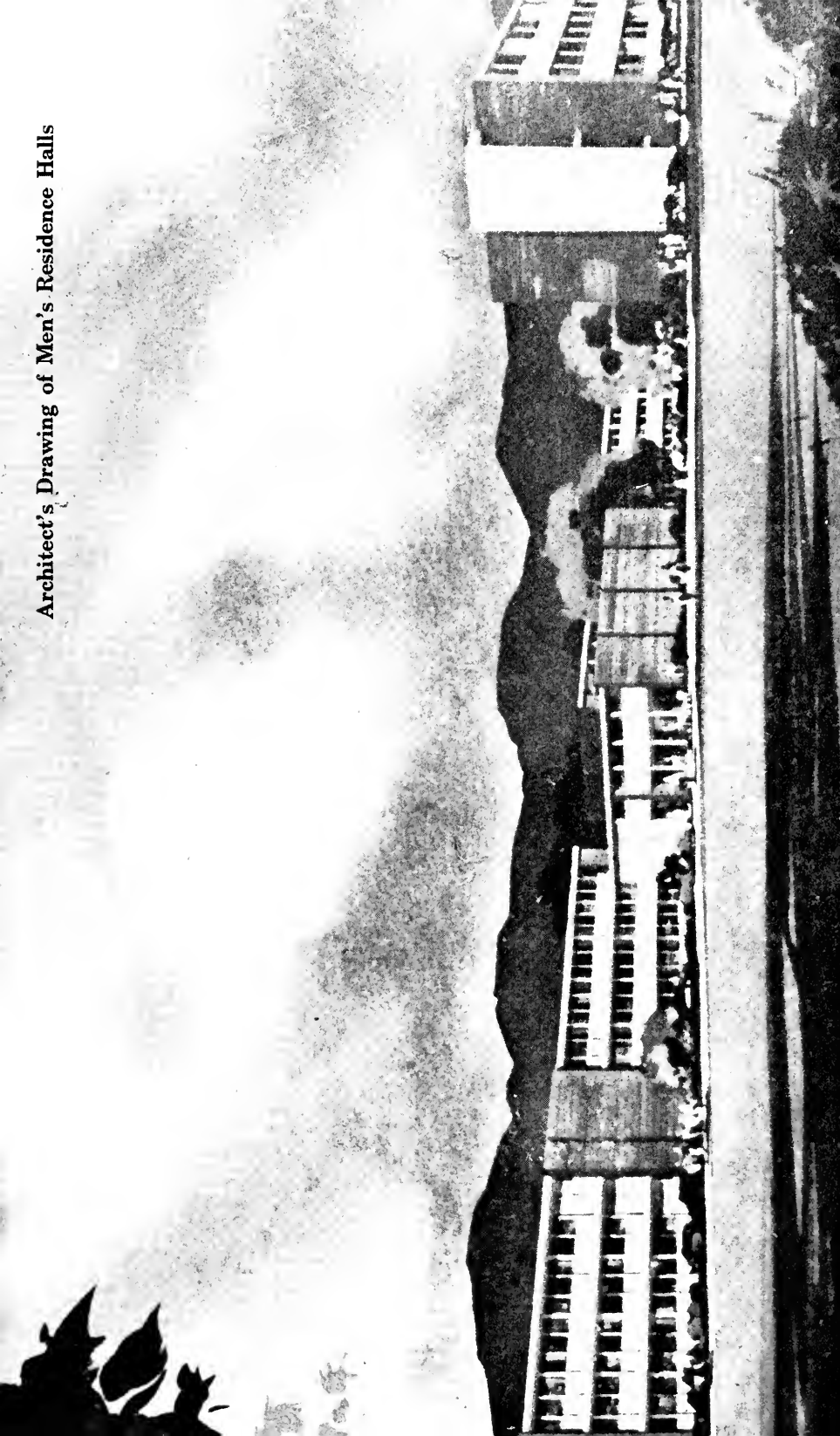
George Albert Smith Fieldhouse



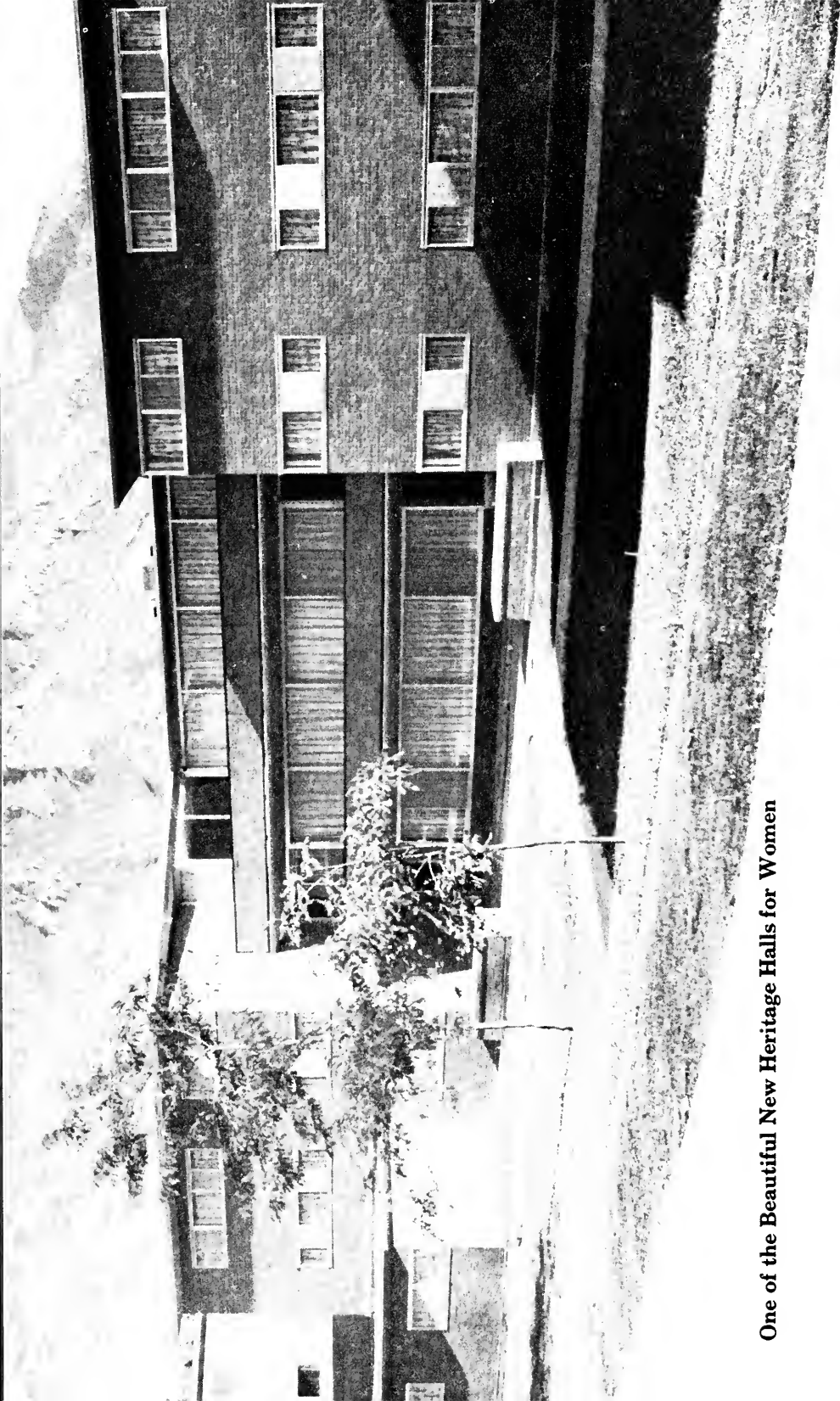


Winter Snow Blankets the Campus

Architect's Drawing of Men's Residence Halls







One of the Beautiful New Heritage Halls for Women



The Arts—an Important Segment of University Education



Among his most significant achievements is the organization on January 8, 1956, of the Brigham Young University Stake of the Church. The original twelve wards have been increased to eighteen. Spiritual benefits of this program to students have been incalculable. One specific advantage is the providing of a spiritual adviser to every 300 or 400 students, supplementing the regular university counseling service and offering a dual system of advising and counseling.

During the administration of President Wilkinson, the following new buildings and facilities, costing a total of more than \$11,000,000 have been added to the facilities of the University:

The Herald R. Clark Student Service Center, begun in July 1952, was completed and made available for occupancy in March 1953. The financing of this building was primarily from income of the Student Supply over its years of operation. In the building are housed, in addition to the bookstore itself, the Adult Education and Extension Services, including the Audio-Visual Aids Department, the studentbody offices and organizations, student publications, and student services such as a placement bureau, a housing office, and a post office.

A large building project was started July 1952 with the construction of 16 buildings making up what is known as Heritage Halls. These buildings, completely modern in every respect, house 972 girls. Six girls live together in an apartment, preparing their own meals and doing their own housework. There are ten apartments to a building. Occupancy of the first of the buildings was begun in March 1953. The entire project was completed and fully occupied by the Fall Quarter of 1953.

The Engineering Building, constructed in 1953 and added to in 1954 and 1955, is an H-shaped building having four wings with laboratory space for the Civil, Mechanical, Electrical, and Chemical Engineering Departments. The central core of the building consists of offices serving the needs of the teaching staff. In 1953 a motion picture building with sound stage and related facilities was constructed. This building is equipped with the most modern animation and motion picture sound equipment for the production of educational moving pictures used throughout the Church.

The David O. McKay Building, a classroom building containing 104 offices and 31 classrooms and laboratories, was begun in March 1954 and completed in December of that same year. This building currently houses the College of Education, the Departments of English, Modern Languages, History, and Political Science, and sections of the Department of Religion. In the early spring of 1955, the Benjamin Cluff Plant Science Laboratory, with two connecting greenhouses, was completed. This structure is used by the Botany, Agronomy, Horticulture and Horticultural Specialties Departments. The Howard S. McDonald Student Health Center was opened for use of all students enrolled at the University in the fall of 1955. The lower floor of this structure is currently used as headquarters for the A.F.R.O.T.C.

Eight new buildings to house women students were added to the original 16 buildings of the Heritage Halls group. The total project was completed in the summer of 1956 and was fully occupied for the Fall Quarter of that year. The addition of these eight structures brings the total accommodations for this type of housing for women to 1539.

Construction of the Joseph F. Smith Family Living Center began in the fall of 1955 and was completed in December 1956. Housed in this structure are the College of Family Living, the School of Nursing, a nursery school, and the Departments of Psychology and Sociology.

New housing facilities for married couples were added to the university housing projects in 1957. Wyview Village, a project consisting of 150 two- and three-bedroom homes for married students, was completed and fully occupied in the fall of 1957.

Construction of new men's residence halls to house 1170 men was begun early in 1957. The halls will be occupied for the first time in the fall of 1958. This

has been the largest single building project ever undertaken on the B.Y.U. campus.

In 1957 the university heating system was converted to a \$4,000,000 high temperature water system.

Many new projects have been authorized by the Board of Trustees to keep pace with the ever-expanding requirements of the University. These projects are in various stages of planning and development. Plans are proceeding rapidly on a new administration and general services building; a new library, a new physical education and recreation center, which, among other facilities, is to have swimming pools and a gymnasium for women; a student commons building; an extension of the present George Albert Smith Fieldhouse; additional housing for single women and for married students; new structures and facilities for the agricultural departments; and new motion picture production facilities.

The University Today

Unification Plan. In every era of the Church its leadership has been sensitive to the need of continued intellectual and spiritual growth for its members. To meet this need, Church educational policies have constantly been adapted or modified to serve more fully the youth of the Church.

It was in such a spirit that all Church educational institutions were combined in July 1953 under one administrator, Ernest L. Wilkinson, who in turn is subject to a board of trustees for Brigham Young University and a board of education for the rest of the Church School System. Both boards, however, consist of the First Presidency and the Council of the Twelve. In announcing this unified plan the First Presidency said: "This great system of schools, institutes, and seminaries can become an ever more effective instrumentality in equipping the youth of the Church with solid foundations to meet the challenge of modern living." It added that Dr. Wilkinson "has surrounded himself with strong men to do a big job," and that "he will have at his service the strength not only of these men, but of all the members of the Brigham Young University Faculty."

Since the approval of this plan during the summer of 1953 the administrative offices of Church education have been established at Brigham Young University. Thus Brigham Young University becomes the mother institution for Latter-day Saint education. From this campus a spirit of simplifying efficiency, economy, uniformity of standards and procedures, and even wider cooperation and harmony can now weld all phases of Church educational work into a stronger unit than ever before.

Ernest L. Wilkinson, administrator of the unification plan, continues as President of Brigham Young University. Assisting him are three vice presidents: William E. Berrett, Earl C. Crockett, and Harvey L. Taylor. Joseph T. Bentley is administrative assistant to President Wilkinson.

Under this new plan, established schools, seminaries, institutes, and colleges continue their functions. Changes will be brought about as need and the growth of the Church dictate. In addition, each institution shares its particular problems and philosophies with its sister institutions, as coordinated and and interpreted by the administrator and his assistants.

Academic Growth and Recognition. The Brigham Young Academy as originally organized by Karl G. Maeser had three departments: the Academic, the Intermediate, and the Primary. Instruction was given mostly in the work of the lower grades, although a normal class was included in the Academic Department. Today the University offers a full university curriculum, and its credits are recognized and accepted to the same extent as those of other leading American colleges.

The Brigham Young University is affiliated with the following educational associations:

- American Association for Adult Education
- American Association of Colleges for Teacher Education
- American Association of Collegiate Registrars and Admissions Officers
- American Association of University Women
- American College Public Relations Association
- American Council on Education
- American Library Association
- The American School of Oriental Research
- American Society for Engineering Education
- Association of American Colleges
- Department of Baccalaureate and Higher Degree of the National League for Nursing
- Educational Films Library Association
- National Association of Student Personnel Administrators
- National Commission of Accrediting
- National University Extension Association
- Utah Conference on Higher Education
- Western Council for Higher Education in Nursing
- Western Interstate Commission on Higher Education
- Western Personnel Institute

In addition, Brigham Young University is fully accredited by the following organizations:

- Northwest Association of Secondary and Higher Schools
- American Chemical Society
- National Council for Accreditation of Teacher Education
- National League for Nursing
- Utah State Department of Public Instruction in cooperation with the United States Office of Education for the training of vocational home economics teachers.

Growth of Student Body. When founded in 1875, Brigham Young Academy gave elementary and high school work only. Over the eighty years of its existence it has become in terms of full-time equivalent students the largest university in Utah. At the present time it is experiencing a rapid growth, which, if continued, will soon make it one of the large institutions of the West.

At the time of its organization in 1875, nearly all of the students came from Utah County and its environs. Its student enrollment began at 29. During the regular 1957-58 school year, it had on the campus approximately 10,542 daytime resident students. These, together with students of the Summer School, the Laboratory Schools, and Extension Services, bring the total of students served to more than 16,827 for the year.

The students registered during the last few years came from the forty-eight states of the Union, the District of Columbia, the territories of Hawaii, Alaska and the Panama Canal Zone, and from 30 foreign countries. Approximately 56 per cent of the students are from outside the state of Utah, and this percentage is increasing each year.

As in the days of Dr. Maeser, industry and thrift are encouraged, and at the present time approximately 40 per cent of all students are employed, earning a part of their subsistence.

Membership in the Church of Jesus Christ of Latter-day Saints is not required for admission, although at the present time 97 per cent of the students are members of the Church. The other three per cent, as a condition of their continuance as members of the student body, are required to abide by the same standards of morality and integrity as other students.

SCIENCE AND ART COLLECTIONS

The archaeological collection consists of materials for study and research in the early history of man. Original antiquities on display, illustrating the early history of man in the Old World, range from crude stone "hand axes" of the Old Stone Age to inscribed tablets and other advanced products of the ancient biblical civilizations of the Near East; those illustrating the early history of man in the New World include representative artifacts of the early Indian cultures of Utah and the Southwest and antiquities of the ancient pre-Columbian civilizations of Mexico, Central and South America. Supplementing this exhibit are replicas of such famous archaeological monuments as the Rosetta Stone, key to the deciphering of the Egyptian hieroglyphics, and the "Tablet of the Cross" from the ancient Maya city of Palenque in Central America.

Also in the archaeological museum is a research archive of several thousand photographs and field card records of antiquities excavated or examined by archaeological expeditions of the University and other institutions.

The botanical collection includes a herbarium of fungi, liverworts, mosses and vascular plants from many parts of the world. The mycological collection consists of over 600 specimens of fleshy and parasitic fungi, most of which have been collected in the Rocky Mountain area. This represents one of the best collections of fleshy fungi of this region.

The vascular plant herbarium includes some 200 plant families, 1200 genera, and 4000 species. These are represented by over 25,000 herbarium sheets. The collection is made up principally of plants collected in the Western States, but many plants of the Eastern States, Europe and South America are included as well as a good representation of the Arctic regions of Siberia, Iceland and the Aleutians. The grasses are especially well represented. A separate collection of poisonous plants, range plants, woody plants and plant diseases is maintained.

The department maintains a botany garden or arboretum where more than 300 trees of various regions of North America representing in excess of 100 species are grown in natural association. This garden is designed as an experimental project to enrich the tree flora available for use as shade trees, as a public educational exhibit and as a study area for many classes.

The fine arts collection of paintings, sculpture, drawings, etchings, engravings, monotypes, lithographs, and reproductions of works of art is as follows:

I. Memorial Collections.

1. The Lee Greene Richards Collection of 36 paintings.
2. The James T. Harwood Collection of 90 paintings, etchings, and drawings.
3. The John Hafen Collection of 24 paintings.
4. The Elbert H. Eastmond Collection of 64 paintings.
5. The John Willard Clawson Collection of 85 paintings and sketches.
6. The Maynard Dixon Collection of 85 paintings and sketches.
7. The Edwin Evans Collection of 61 paintings.
8. The Rose Hartwell Collection of 71 paintings.
9. The Rose Hartwell Crafts Collection.
10. The Joseph Imhof Collection of lithographs.
11. The Merlin A. Steed Collection of 70 paintings.

II. Other Utah artists represented: George M. Ottinger, Daniel Weggeland, Loris Pratt, John B. Fairbanks, Samuel Jepperson, Minerva Teichert, Alma Wright, Waldo Midgley, Calvin Fletcher, Cornelius Salisbury, Joseph Everett, Henri Moser, Torlief Knaphus, Avar Fairbanks, Henry Rasmussen, B. F. Larsen, Edgar M. Jenson, Glen H. Turner, and J. Roman Andrus.

III. Well-known national artists represented: Lee Randolph, George Elmer

Browne, Fern Gary, Gordon Grant, Marie A. Hull, Haley Lever, Clarence Millet, Luis F. Mora, Chauncey F. Ryder, Matteo Sandona, W. Lester Stevens, Anthony Thieme, John Law Walker, J. Alden Weir, John Whorf, Eliot Daingerfield, George Pierce Ennis, John E. Costigan, George Henry Taggart, William Morris, Jon Corbino, J. Connaway, Robert Brackman, Peter Hurd, Marguerite Pearson, Henry W. Ranger, John Twachtman, John F. Carlson, Gene Kloss, Earle Loran, Emil Bistran, Umberto Romano and Lez Haas.

IV. Original etchings, lithographs and prints, including the work of Ernest Fiene, Rockwell Kent, Joe Jones, Reginald Marsh, Waldo Pierce, Herbert Dunton, Boardman Robinson, Otis Dozier, Lawrence Barrett, John Taylor Arms, Kaethe Kollwitz, Gene Kloss, Conrad Buff, and Reynold W. Weidenaar. There are also 24 Rembrandt replicas.

V. Oriental art, including Japanese paintings, prints, and reproductions.

VI. Reproductions of famous works of art, including various types of modern art.

VII. Large collections of slides, including natural color slides and the George K. Lewis memorial collection of kodachrome slides.

The Lotta Van Buren Collection of ancient instruments and music contains rare old instruments, modern reproductions of ancient instruments, literature on ancient instruments, and a library of old instrument scores. In this collection are also some ancient costumes and pictures of interest.

Among the instruments, some of which were made in the Fifteenth Century, are the following: a viola da gamba (once owned by George Frederic Handel), five viols, a cittern, an Arabian lute, a two-manual harpsichord, a virginals, an octavina, two clavichords, a hurdy-gurdy, and other such instruments.

The Van Buren Collection is one of the few collections in the United States in which all instruments are in playable condition. Several concerts in which some of these instruments are used are given each year.

This unusual collection, housed in a specially equipped room (210 College Building), is open for inspection by the public.

The geological collections of the University consist of an unusually complete series of minerals and an interesting variety of fossils.

The minerals number many thousands and are representative of the great western mining districts together with hundreds of localities of note. Part of this collection once represented the nucleus of the famous Deseret Museum Collection of Salt Lake City.

The fossil series are representative of many states and typical world localities. Much of this material also was formerly a part of the Deseret Museum Collection.

The zoological and entomological collections of the University consist of a large series of identified vertebrate and invertebrate species of Utah and contiguous states. A complete series of fish, amphibians, reptiles, birds, and mammals of this region is to be found in the collection. The fish and reptile collection is especially rich in species and specimens from the intermountain region. The bird collection consists of about 4,500 skins, 1,000 of which were collected in the Magdalena River Valley of South America by Chester Van Buren in 1901-03.

The entomological collections consist of 325,000 specimens. The Tom Spaulding Collection of Utah Lepidoptera, the Chester Van Buren Collection of South American Butterflies, the Charles W. Leng Weevil Collection, the Charles Schaeffer Weevil Collection, and many species of weevils from the Blatchley Collection form important portions of this collection.

The natural history collections consist of a complete collection of Utah fish,

amphibians, reptiles, birds and mammals. The bird egg collection has recently been greatly supplemented by the addition of the Robert Bee Oölogical Collection. This collection is also supplemented by the David Starr Jordan Collection of fish from the Hawaiian Islands, and a collection of reptiles from Oceania and the Philippine Islands. The entomological collection contains authoritatively named specimens in all the orders of insects. The pinned insects are placed in 450 trays, 18x19 inches in size, 2 inches deep. The specimens are pinned in unit boxes. The lepidoptera collection is fairly complete, containing specimens from Utah and the Great Basin region. It contains over 600 named species and 10,000 specimens. It is made up of the famous Tom Spaulding Collection and the Chester Van Buren Collections. The coleoptera collection contains over 6,000 determined species and 50,000 specimens. It contains a fairly complete collection of weevils, the Charles W. Leng Collection of 1676 species, 300 species from the Blatchley Collection, and the Charles Schaeffer Weevil Collection consisting of 813 species. A large collection of insects was made by staff members and former students in the South Pacific Islands, 1942-45. Many types, cotypes, and paratypes of specimens are in the collections. All these collections are housed in the fireproof George H. Brimhall Building.

These collections are being added to annually by means of collection expeditions that are sent out to various parts of the western United States. During 1944-45, 1,000 specimens of reptiles and 25,000 specimens of insects were received from staff members and former students who were on duty in the South Pacific.

CAMPUS LIBRARIES

The Heber J. Grant Library Building contains the general library collection, which includes over 250,000 bound volumes, several thousand pamphlets, and an extensive collection of titles on microfilm and microcards. A good selection of profession journals and of other current periodicals, as well as local, regional, and national newspapers, is also available.

The Brigham Young University Library is a depository for United States government documents and receives regularly publications of state and local governments. The general library facilities are available to students, faculty, alumni, and other interested persons. Regularly enrolled students present their activity cards to borrow books. Others may obtain a permit from the Circulation Librarian. The library is open, during the college year, from 7:30 a.m. to 10:00 p.m., Monday through Friday and from 9:00 a.m. to 5:00 p.m. Saturdays. It is closed during assemblies each Tuesday and Thursday from 9:00 to 10:00 a.m. Vacation hours, when school is not in session, are 9:00 a.m. to 5:00 p.m., Monday through Friday, closed weekends and holidays.

Reserve book service for the Grant Library is maintained in rooms 212 and 213 of the McKay Building. Other books are placed on reserve in the library that houses the main collection for that particular subject area.

The Science Library is on the main floor of the Carl F. Eyring Science Center. Books and periodicals in the following subject fields are found housed in this collection: physical science, radio, engineering, photography, and antiquities. The university map collection is located in the map room of the Science Library.

The Life Sciences Library—including Biological and Agricultural Sciences, Nursing, and Home Economics—is in the west basement of the Family Living Center.

The Phonograph Record Library is in Room 3263 Family Living Center. All students and faculty are invited to use these facilities. Libraries are also maintained in connection with two laboratory schools on Lower Campus. These are available to students majoring in the College of Education as a part of their training program.

In Room 160 of the Student Service Center the Journalism Department maintains a reading room containing current copies of daily newspapers, news magazines of the United States, and daily and weekly newspapers of the Intermountain region. A collection of periodicals in agriculture is located in Room 160 of the Brimhall Building.

The Special Collections of the university library are located in the Heber J. Grant Library Building. The books and other material housed in this area are not available for general circulation. Such collections often come to the library from individuals whose interests lead them to devote many years to their acquisition. The material within each collection is usually confined to a specific subject area. The Brigham Young University collection of Mormon-Americana and the William Gates collection of Middle-American Linguistics are an indication of the variety of materials available in Special Collections.

The facilities of other libraries operated by the L.D.S. Church are also available to students of the Brigham Young University. The L.D.S. Genealogical Society Library, located at 80 N. Main Street in Salt Lake City, is open every day except Sunday. This collection contains approximately 55,000 books and 125,000 rolls of microfilm. These include family histories, genealogy, biography and autobiography, military records, cemetery inscriptions, town, county and state histories of the United States and both local and national histories of other nations.

Facilities of the Library of the Church Historian's Office are available to advanced students for research, by arrangement. It is located in Room 103 of the L.D.S. Church Office Building, 47 E. South Temple, in Salt Lake City, and is open from 8:30 a.m. to 5:00 p.m., Monday through Friday. Its collections contain publications of the Church, periodicals of the various auxiliary organizations, reports and histories of the various missions, general history of the Church, biographies of Church leaders, and other pertinent published and archival material.

MOTION PICTURE PRODUCTION

The Department of Motion Picture Production has been established to produce documentary, historical, and training films for use in the Church and in schools. A correlated program with drama, music, art, writing, and all creative departments on campus will be used to produce films for instruction, television, and public relations.

Requirements for Admission

Admission

Admission to the University is granted on the basis of an official application. The necessary forms will be furnished by the Admissions Office upon request.

Applications should be submitted at least **thirty days** prior to the time of registration. Students who submit applications after this day may encounter delay and inconvenience in their admission and registration. Late registration resulting from late application subjects the applicant to the late registration fee.

To be admitted to the University as a regularly matriculated student, an applicant must be a graduate of an approved high school and must have selected nine academic units from one or more of the following areas: English, mathematics, science, social science, or foreign language.

To be eligible for regular admission, a student must also have a grade-point average of 2.2 (A=4.0, B=3.0, C=2.0, D=1.0, E=0) in his previous high school or college work. If a student has a grade-point average of 2.0 to 2.2 he **may** be admitted on academic probation.

Students who apply for admission and who are accepted by Brigham Young University are required to maintain ideals and standards in harmony with those of the Church of Jesus Christ of Latter-day Saints. High standards of honor, integrity, and morality, graciousness in personal behavior, application of Christian ideals in everyday living, and abstinence from alcohol and tobacco are required of every student.

A student who has not graduated from high school but who has sixteen units (Carnegie) of high school credit may be admitted if his course of study and grades are approved by the Admissions Committee.

Students nineteen years of age and over who have not completed high school but who are otherwise eligible for admission may register as regularly matriculated students after the successful completion of the high school level General Education Development Tests. These tests may be taken at Brigham Young University, at the testing divisions of most colleges and universities, at most Armed Forces Educational Centers, or at a number of high schools.

All new freshmen and sophomores are required to take the University Entrance Test at orientation time or as scheduled by the University.

Students who are planning to enter the Graduate School should consult the Graduate School section of the catalog for information on admission.

Requirements for Undergraduate Work

Course Divisions

Courses of study are given numbers as follows:

Preparatory and remedial courses	1-99
Lower division courses	100-299
Upper division courses	300-499
Courses for graduates or advanced undergraduates	500-599
Graduate courses	600 and above

Election of Studies

With the advice and approval of the dean of the college in which he registers, the student should elect such studies as are desirable. The major and minor, as well as the general requirements for graduation, should be kept in mind in electing studies. Each student is required to take Health 130 sometime during his freshman year and one lower division physical education course during each quarter of his freshman year. However, air science students need take physical education only two quarters, as two years of air science reduce the graduation requirement in physical education to two hours.

Should a currently enrolled students desire to take courses by correspondence or in extension classes, the approval of the student's dean must be secured and the correspondence or extension work will be considered a part of his load. Students will be held responsible for any unauthorized overload for which they register, and such credit will not be allowed. Resident students of other institutions who apply for correspondence or extension class work at this University must have their proposed registration approved by the dean of their college in the institution in which they are registered. Students wishing to transfer correspondence credits from other institutions are subject to examination by the university department concerned.

At least five quarters of lower division work should be completed before the student registers for upper division work, unless in certain sequences the dean, with the consent of the instructor, advises otherwise. Included in the lower division work must be English 110 or 111; 112 or 115; and 113 or 116; and, for the A.B. degree, twelve hours in foreign language work. In order to qualify for the Bachelor of Arts degree, a candidate must furnish a training equivalent to 24 hours of college credit in a foreign language.

Classification of Students

At the beginning of each quarter regular students will be classified for that quarter as follows:

Credit hours earned	Classification
0 to 46	freshman
47 to 92	sophomore
93 to 139	junior
140 and over	senior

Completion of the required courses in freshman composition is prerequisite to classification as a junior.

A student who has met the entrance requirements but who registers for nine hours of work or less will be classed as a part-time student.

A regular student who has completed all requirements for the bachelor's degree is classed as a graduate student from that time on and must register in the Graduate School regardless of whether he registers for graduate or undergraduate courses or for study not intended to be used for a higher degree. Admission procedures to the Graduate School are indicated in the Graduate Catalog and apply to those who have graduated from Brigham Young University as well as from other universities.

Credits

A student may have credit entered on the books of the University as follows: 1. For work done in the regular courses offered by the institution. 2. For work done in an accredited college when such credit is to be used for graduation from the University, the amount to be determined by the Committee on Admissions and Credits. 3. By passing a satisfactory examination in any course offered by the University under the supervision of the head of the department concerned. Credits from other schools should be filed with the registrar upon entrance.

Special examinations for credit will be given only with the consent of the head of the department concerned, the dean of the college in which the student is registered, and the committee on Admissions and Credits.

An incompleted course of study must be completed within one year from the end of the quarter when the incomplete was given. If a student does not complete a course within the prescribed time, his grade for the course automatically becomes an "E".

By payment of an auditing fee, a student may obtain permission to audit courses of instruction. Under no circumstances can credit be obtained by means of special examinations for courses which have been audited.

A fee of \$5.00 per credit hour is charged for special examinations, provided the total fee for any one subject does not exceed \$40.00.

It is the policy of the University to send quarterly grade reports to the parents of unmarried freshmen students under twenty-one years of age and to parents of all unmarried students under 21 years of age who are on failure or probationary status.

Withdrawal from Classes

Students discontinuing registration at the University are required to clear their termination through the office of the dean of their college and then the dean of students.

Students withdrawing from individual classes shall clear with the dean of the college or the chairman of general registration if they are not in a college.

- a. If a student officially withdraws from a class during the first three weeks of a quarter, the permanent record will show no registration for the class in question.
- b. If a student officially withdraws from a class during the second three weeks of a quarter, the permanent record of the student will show the letter "W" for the class in question.
- c. Except for reasons beyond his control a student who officially withdraws after the first six weeks of each quarter will have "WE" shown on his perma-

nent record for each class dropped. A "W" grade does not count for or against grade points in computing the grade point average. A "WE" grade counts the same as an "E" grade in computing the grade point average.

- d. If a student drops a class any time during the quarter without officially withdrawing, he will receive a grade of "UW" (meaning unofficial withdrawal) in every course so dropped. This will indicate that the student has failed to clear officially with the University. This grade will count in grade points the same as a failure grade of "E."

Withdrawal from Evening School Classes. Any student who wants to withdraw from a class for which he registered in the Extension Services office must do so by notifying that office and completing the withdrawal forms. An evening school student who does not properly withdraw will receive a failing grade.

Limitation on Credit in One Quarter

Undergraduate students in good standing may register for as many as 17 hours of credit in any one quarter by following the regular registration procedures. In the case of a student who has academic ability of high quality, the dean of a college or the chairman of general registration may authorize the student to register for a maximum of 18 hours for the first quarter in residence and a maximum of 19 hours for any succeeding quarter. Any student who has completed 15 or more hours of college work and who has a cumulative average of 3.5 (or a 3.5 average in the quarter previous to registration) may register, with the consent of his dean, for 21 hours. Any exceptions to the above rules shall be presented to the Deans' Council for consideration.

Standards in English

Throughout his college career, each student is expected to use the English language accurately and effectively. A booklet entitled "English Standards at Brigham Young University," on sale at the Student Supply, gives detailed information on what is expected of the student.

Each junior is expected to pass an essay examination as a demonstration of his ability to write effectively. Anyone failing that examination will take a non-credit remedial course to correct his deficiencies.

Students of the University are expected to maintain acceptable standards of usage in oral and written English in recitations, written assignments, examinations, and all other academic work. This requirement will be enforced by teachers in all subjects and by the action of a committee representing the entire University.

Certification for Teaching

All students who are preparing for a teaching certificate must secure written approval of their programs from the Teacher Certification Office of the College of Education. Those who delay this later than the first quarter of their sophomore year may be delayed beyond graduation for the completion of their certification requirements.

Requirements for Graduation

General

For a student to be admitted to candidacy for a diploma or a degree, his scholastic record must show that he has satisfied the entrance requirements and that he can fulfill all the requirements for graduation on completion of the courses for which he is registered. The student must earn at least forty-five quarter hours of credit on the Brigham Young University campus at Provo.

The following graduation requirements apply to all candidates for a bachelor's degree from any of the colleges of the University.

Total amount of credit	186 hours
Upper division work (minimum)	60 hours
Requirement for a major	30 or more hours
Requirement for a minor	20 hours

A candidate for a Bachelor of Arts degree is required to furnish training equivalent to twenty-four hours of college credit in one foreign language. A candidate for a Bachelor of Science degree is not required to submit credit in a foreign language.

Not more than thirty-five hours of the 186 hours required for a bachelor's degree may be correspondence credit.

Not more than twenty-eight hours of "D" grade credit will be applied toward graduation.

Students who expect to be graduated at the end of the Spring Quarter should file application with the Registrar's office not later than January 15th. Students who fulfill all requirements for graduation at the close of the Summer Quarter and who have filed applications for graduation not later than March 15th will participate in the Summer School commencement exercises in August. All conditions must be removed not later than four weeks before graduation.

All graduating seniors must attend the graduation exercises unless they have been excused or have made satisfactory explanations of absence. Absence will be excused when based upon any of the following reasons:

1. Prior entrance into the armed services
2. Completion of work at the University prior to Spring Quarter and present employment which makes it impossible to attend commencement
3. Serious illness or death in the family or some other emergency
4. Enrollment in another school or university
5. Service in the mission field

Students not officially excused from commencement will not be graduated until they attend a later commencement in person.

The University reserves the right to change the requirements for graduation, and a candidate for graduation will be asked to comply with all changes which pertain to the uncompleted portion of his course.

All candidates for a bachelor's degree must fill the group requirements listed below under the topic "General Education Program."

GENERAL EDUCATION PROGRAM

Physical Science	9 hours
Biological Science	8 hours
Social Science	15 hours
Freshman Composition 111, 112, 113	9 hours
or	
Freshman Composition 115, 116	6 hours
Humanities and Aesthetics	15 hours

Religion. Two credit hours in religion are required of every student for each quarter in which he is a full time student at B.Y.U., including the Summer Quarter. To be eligible for graduation, special students enrolled at Brigham Young University shall be required to accumulate credit in religion at the ratio of one credit hour to eight credit hours in other subjects taken at the University.

History. Five credit hours in American history and government are required for graduation. (See Department of History.)

English. English 110, 112, 113; or 111, 112, 113; or 115, 116 or their equivalents are required of all students.

Each student with more than ninety quarter hours of credit who has completed his Freshman Composition requirement must take the Junior English Proficiency Examination the first quarter in which he is eligible for it. If he fails this examination, he must take a non-credit remedial course during the next quarter in which he is a full-time student to correct his deficiencies before he may take the Proficiency Examination again. Passing this examination is a graduation requirement.

Health. Each student is required to complete successfully Health 130 some time during his freshman year. Transfer students must have the equivalent or take the course before graduation. **Exceptions:** (1) Students enrolled in the School of Nursing who complete Nursing 202 and 212 are not required to take Health 130. (2) Veterans are allowed credit for Health 130. (This does not apply to six-month military trainees.)

Physical Education. Each student is required to complete successfully one lower division physical education service course during each quarter of his freshman year. Transfer students must have the equivalent or take the courses before graduation. **Exceptions:** (1) Students who are majoring in and who complete the course in engineering science together with requirements for an air science commission are not subject to the above requirement. (2) Freshman air science students need take only two of the usual three required quarters of physical education. Withdrawal from the air science program before completion of six credit hours imposes the full physical education requirements. (3) Veterans, with the exception of six-month military trainees, are allowed three hours credit in physical education.

Students desiring exemption from physical education for medical reasons must obtain an excuse from the University physician. Written statements from the local doctor must be approved by the University physician.

GENERAL EDUCATION COURSES

The object of the general education requirements of the University is to introduce the student as broadly and effectively as possible to fundamental fields of learning and assist him in coming to an understanding of some of the important influences that bear on human living. In order that these purposes may be achieved, the basic areas have been grouped, and specified courses within these areas have been approved from which students may select courses in fulfillment of general education requirements. The student is advised to fill these requirements by registering for courses in these groups at an approximate rate of four to five hours per quarter in addition to two hours in religion throughout his entire four years of study. Courses with prerequisites are preceded by a dagger (†).

1. Physical Science, 9 hours. (chemistry, geology, physics)

Option 1. At least one course must be selected from two of the following three departmental lists, so that a minimum of nine credit hours is accumulated:

- Chemistry 100 (3) Elementary College Chemistry
- Chemistry 101 (5) Introductory General Chemistry (for family living, nursing, general biology, and agriculture students)
- †Chemistry 102 (4) Introductory Organic Chemistry (for family living, nursing, general biology, and agriculture students)
- †Chemistry 105, 106, 107 (4-4-4) General College Chemistry (designed for engineering students)
- †Chemistry 111, 112 (5-5) Principles of Chemistry
- Geology 101 (3) Introduction to Geology
- Geology 102 (1) Introduction to Geology Laboratory (may be taken only if accompanying Geology 101)
- Geology 103 (3) Life of the Past
- Geology 111 (5) Physical Geology
- Physics 101 (3) Essentials of Physics
- Physics 102, 103, 104 (3-3-3) Fundamentals of Physics
- †Physics 111, 112 (5-5) General Physics (designed primarily for pre-medical and biological science majors)
- Physics 127 (3) Descriptive Astronomy, "The Solar System"
- Physics 128 (3) Descriptive Astronomy, "The Stellar System"
- Physics 137 (4) Weather and Climate
- (Physics 177 (4) Physics of Light and Photography)
- †Physics 211, 212 (5-5) General Physics (designed primarily for physical science and engineering majors)

Option 2. The physical science requirement may be met by completing all nine hours in Physical Science 101, 102, 103 (3-3-3) with the understanding that no part credit in these courses may be used in fulfillment of Option 1.

Physical Science 101, 102, and 103 would be suitable for students having little background in science, as well as for those who intend to specialize in a scientific field.

For course description see Physical Science under general list of courses.

2. Biological Science, 8 hours. (bacteriology, botany, zoology and entomology) To satisfactory the general education requirement in biological sciences, the student must complete a minimum of 8 quarter hours of college credit. This shall include at least one of the following three courses: Bacteriology 121 (Bacteriology 301 for engineering students), Botany 101 or Zoology 105 (Zoology 109 for nursing and physical therapy students). The remaining requirements shall be satisfied by taking another of these three courses or any of the following courses approved for general education in the Departments of Bacteriology, Botany, and Zoology:

- Bacteriology 121 (4) General Bacteriology
- †Bacteriology 301 (5) Microbiology
- Bacteriology 311 (3) Sanitation and Public Health
- †Bacteriology 381 (3) Water and Sewage Bacteriology (for engineering students only)
- Botany 101 (5) General Botany
- Botany 112 (4) The Plant Kingdom
- Botany 123 (5) Plant Classification
- †Botany 145 (3) Principles of Genetics
- Botany 230 (3) Trees and Shrubs
- †Botany 430 (5) Plant Ecology
- †Botany 435 (3) Plant Geography
- Botany 451 (3) Conservation of Natural Resources
- Zoology 105 (5) General Zoology
- Zoology 107 (5) Elementary Human Physiology (family living students only)

- Zoology 109 (5) General Zoology for Nurses
 †Zoology 164 (5) Human Anatomy and Physiology
 †Zoology 176 (3) Survey Course in Heredity
 Zoology 230 (5) Introductory Entomology
 Zoology 357 (3) Natural and Human Resources
 †Zoology 550 (5) Principles of Ecology and Bio-geography

3. Social Science, 15 hours. (economics, human development and family relationships, geography, political science, psychology, sociology) At least two fields must be included in fulfillment of the requirements of this group. Only the following courses may apply toward fulfillment of this requirement:

- Agricultural Economics 101 (5) Economics and Agriculture

- Economics 101 (5) Economic Principles
 Economics 461 (3) Labor Problems and Labor Relations
 Economics 575 (5) Government Finance

- Geography 105 (5) Introduction to Geography
 Geography 110 (5) Geography in World Affairs
 Geography 223 (5) Economic Geography
 Geography 310 (5) Geography of North America
 Geography 430 (5) Europe

- History 170 or 180 (5) The American Heritage

- †Human Development and Family Relationships 210 (3) Child Development I
 Human Development and Family Relationships 360 (3) Achieving Success in Marriage

- †Human Development and Family Relationships 361 (3) Family Relationships
 †Human Development and Family Relationships 412 (3) Principles of Child Guidance

- †Human Development and Family Relationships 440 (3) Family Life in the Middle and Later Years

- Political Science 105 (2) Current Affairs
 Political Science 110 (5) American Government
 Political Science 111 (5) State and Local Governments
 Political Science 112 (5) Foreign Governments
 Political Science 115 (4) Introduction to International Relations

- Psychology 111 (5) General Psychology
 †Psychology 205 (3) Applied Psychology
 †Psychology 320 (3) Psychology of Childhood
 †Psychology 321 (3) Psychology of Adolescence (Either Psychology 320 or 321 —not both—may apply.)

- †Psychology 322 (3) Psychology of Adult Life
 †Psychology 340 (3) Mental Hygiene
 †Psychology 350 (3) Introduction to Social Psychology
 †Psychology 550 (4) Psychology of Personality

- Sociology 111 (5) Introductory Sociology
 Sociology 112 (5) Social Problems
 Sociology 121 (3) Applied Sociology
 †Sociology 350 (3) Introduction to Social Psychology
 Sociology 443 (3) Sociology of Adjustment in Modern America
 Sociology 499 (3) Community Organization, Action and Planning

4. Humanities and Aesthetics, 15 hours. (archaeology, art, English, literature, history, journalism, languages, music, speech.) In a fifteen-hour total the student must take at least six hours of literature and some work in at least two other departments. A full year's beginning course of fifteen hours in a foreign language shall carry six hours of credit toward the satisfaction of this group requirement and may reduce the requirement in literature to three hours. The student may take any literature course for which he has adequate background. Those English courses listed below are especially recommended. For the non-

literature part of this requirement (archaeology, art, history, etc.), only those courses listed below will be counted.

- Archaeology 150 (4) Introduction to Archaeology
- Archaeology 221 (4) Peoples and Culture
- †Archaeology 310 (3) General Near Eastern and Biblical Archaeology
- †Archaeology 360 (3) Ancient Civilizations of America
- †Archaeology 518 (3) General Classical Archaeology
- Art 101 (2) Introduction to Art
- Art 110 (2) Theory and Practice of Design
- Art 111 (4) Basic Design (Either Art 110 or 111—not both—may apply.)
- Art 121, 122 (4-4) Elementary Drawing
- Art 227 (2) Oil Painting
- Art 233 (2) Watercolor Painting
- Art 259 (2) Ceramics
- Art 263 (2) Crafts
- Art 303 (2) Ancient and Primitive Art
- Art 304 (2) Medieval Art
- Art 305 (2) Renaissance Art
- Art 406 (2) Art History and Appreciation
- Art 407 (3) Contemporary Art
- Art 408 (3) American Art
- Art 501 (3) Aesthetics

Economics 274 (5) Economic and Financial History of the United States

- English 241, 242, 243 (3-3-3) Masters of the Drama
- English 250 (4) Introduction to Literature
- English 252 (3) Introduction to Poetry
- English 253 (3) Introduction to Drama
- English 254 (3) Introduction to Biography
- English 261, 262, 263 (2-2-2) Masterpieces of American Literature
- English 271, 272, 273 (2-2-2) Masterpieces of English Literature
- English 282 (3) Shakespeare
- English 331, 332, 333 (3-3-3) The English Novel
- English 335, 336 (3-3) The American Novel
- English 345 (4) The Spirit of Tragedy
- English 350 (3) The Bible as Literature
- English 356, 357, 358 (3-3-3) World Classics
- English 359 (3) The Short Story
- English 366 (3) Modern Poetry
- English 367 (3) English and American Folk Poetry
- English 376 (3) Twentieth Century English Literature

- History 110 (5) World Civilization I
- History 111 (5) World Civilization II
- History 120 (5) The United States to 1865
- History 121 (5) The United States since 1865
- History 300 (3) Early Oriental History
- History 304 (5) Greek History and Civilization
- History 307 (5) Roman History and Civilization
- History 312 (3) Renaissance and Reformation
- History 323 (3) Europe in the Twentieth Century
- History 330 (5) Russia
- History 332 (3) France Since 1660
- History 333 (3) Modern Germany
- History 334 (3) Spain
- History 335 (5) England
- History 340 (5) Asia
- History 345 (5) China
- History 346 (3) Japan
- History 347 (3) India
- History 350 (5) Latin America
- History 360 (3) The American Frontier
- History 366 (3) Utah

History 373 (3) American Intellectual and Cultural Growth

Humanities 101 (5) Introduction to the Humanities (Two hours of credit from this class may be applied toward fulfilling the general education requirement in literature. The three remaining hours may be counted toward fulfilling the Humanities requirement, but the student must also take courses in a third department from those listed under Humanities and Aesthetics.)

Humanities 459 (3) Lyric Theatre

Journalism 101 (3) Introduction to Mass Communications

Journalism 305 (5) History of Mass Communications

Music 101 (3) Survey Course in Music

Music 301 (2) Elementary Baton Technique and Hymnody

Music 302 (2) Intermediate Baton Technique and Ward Choir Direction

Music 383 (2) History of Sacred Music

†Music 484, 485 (2-2) History of Secular Music

Participation in all choral and instrumental organizations (1 hour total)

Private instruction on any instrument or in voice (2 hours total)

Philosophy 310 (3) Introduction to Logic

Philosophy 420 (3) Ethics

Philosophy 424 (3) Problems of Knowledge

Philosophy 425 (3) Philosophy of Science

Speech 121 (3) Voice and Diction

†Speech 122 (3) Fundamentals of Interpretation

Speech 123 (5) Fundamentals of Acting

Speech 316, 317, 318 (3-3-3) Theatre History

Speech 325 (3) Advanced Interpretation

The first year course in any foreign language fulfills six hours of the group requirement, provided that the student completes the entire course (15 hours). No credit on the group requirement will be given for part (5 to 10 hours) of the first year language course.

Prerequisite to the literature courses in foreign languages are 30 hours of the language or the consent of the instructor. The following language courses may be applied to satisfy the literature requirement in the humanities and aesthetics groups:

†French 431, 432, 433 (3-3-3) Masterpieces of French Literature

†French 441, 442, 443 (3-3-3) Survey of French Literature and Culture

†German 431, 432, 433 (3-3-3) Masterpieces of German Literature

†German 441, 442, 443 (3-3-3) Survey of German Literature and Culture

†German 541 (3) Lessing

†German 542 (3) Schiller

†German 543 (3) Goethe

†Italian 431, 432, 433 (3-3-3) Masterpieces of Italian Literature

†Portuguese 431, 432, 433 (3-3-3) Masterpieces of Brazilian and Portuguese Literature

†Russian 431, 432, 433 (3-3-3) Masterpieces of Russian Literature

†Spanish 431, 432, 433 (3-3-3) Masterpieces of Spanish and Spanish-American Literature

†Spanish 441 442, 443 (3-3-3) Survey of Spanish Literature and Culture

5. Religion. In fulfilling the requirement that for each quarter of full-time study at B.Y.U. a student must complete two hours of credit in religion, freshmen and sophomores, with the exception of returned missionaries, should select their courses from the following areas:

Church Administration 141, 142, 143 (2-2-2) Missionary Approach to the Gospel.

Church History 131, 132, 133 (2-2-2) L.D.S. History and Doctrine

Scripture 111, 112, 113 (2-2-2) Introduction to the Book of Mormon and Its Teachings

Scripture 123, 124, 125 (2-2-2) Introduction to the New Testament and Its Teachings

- Theology 101, 102, 103 (2-2-2) An Introduction to Mormonism
 Theology 104, 105, 106 (2-2-2) The Principles and Doctrines of Mormonism

Juniors and seniors should obtain a minimum of six hours in one or more of the following areas. All transfer students ranking as juniors and all returned missionaries are not only permitted but are expected to select upper division courses in religion.

- Church Administration 301 (2) Priesthood and Church Government
 Church Administration 311 (2) The Church Welfare Program
 Church Administration 317 (2) The Principles of Genealogy and Temple Work
 Church Administration 318 (2) Methods of Genealogical Research
 Church Administration 321 (5) Training for Prospective Missionaries
 Church Administration 322 (5) Latter-day Saint Doctrine for Prospective Missionaries
 Church Administration 349 (2) Economics of the Gospel Plan
 Church History 301, 302, 303 (2-2-2) History of the Church of Jesus Christ of Latter-day Saints
 Church History 304, 305, 306 (2-2-2) History of the Church of Jesus Christ of Latter-day Saints
 Church History 307 (2) Biographies of L.D.S. Leaders
 Church History 364 (2) Survey of Christian History to the Thirteenth Century
 Church History 365 (2) Renaissance and Reformation
 Church History 366 (2) Modern Christian History
 Philosophy 308 (3) Survey of Philosophy
 Philosophy 310 (3) Introduction to Logic
 Philosophy 420 (3) Ethics
 Philosophy 424 (3) Problems of Knowledge
 Philosophy 425 (3) Philosophy of Science
 Recreation 387 (2) Planning for Social Recreation (2:2:0)
 Recreation 388 (2) Leadership in Church Dances (2:2:0)
 Scouting Education 377 (2) Scouting in the L.D.S. Church (2:2:1)
 Scripture 301, 302, 303 (2-2-2) The Old Testament
 Scripture 304 (2) The Spirit of the Old Testament
 Scripture 311 (2) Israel's Prophets
 Scripture 313 (2) The Life of Christ
 Scripture 314 (2) Paul, the Apostle and Missionary
 Scripture 315 (2) An Historical Examination of the New Testament
 Scripture 325 (2) The Doctrines of the Book of Mormon
 Scripture 331, 332, 333 (2-2-2) The Doctrine and Covenants
 Scripture 338 (2) The Pearl of Great Price
 Scripture 339 (3) Doctrines of the Pearl of Great Price
 Scripture 524 (2) Analysis of the Book of Mormon
 Theology 301, 302, 303 (2-2-2) The Principles, Doctrines, and Philosophy of the Church of Jesus Christ of Latter-day Saints

Six hours of credit in the courses listed below may be applied toward a total of 24 hours of credit in religion as well as applying toward the other groups in which they are listed.

- †Archaeology 310 (3) General Near Eastern and Biblical Archaeology
 †Archaeology 360 (3) Ancient Civilizations of America
 English 350 (3) The Bible as Literature
 History 300 (3) Early Oriental History
 History 312 (3) The Renaissance and Reformation
 History 366 (3) Utah
 †Human Development and Family Relationships 210 (3) Child Development I
 †Human Development and Family Relationships 412 (3) Principles of Child Guidance
 †Human Development and Family Relationships 440 (3) Family Life in the Middle and Later Years
 †Human Development and Family Relationships 360 (3) Achieving Success in Marriage
 †Human Development and Family Relationships 361 (3) Family Relationships

- Music 301 (2) Elementary Baton Technique and Hymnody
Music 302 (2) Intermediate Baton Technique and Ward Choir Direction
Music 383 (2) History of Sacred Music

Major and Minor Requirements

At the time of his graduation, the student must have completed at least thirty quarter hours in his major department and no fewer than twenty hours in collateral or minor subjects which meet the approval of the head of his major department.

When the prospective graduate's high school and college work shows marked evidences of deficiencies and grade of scholarship, in breadth of training or in preparation for a probable future activity, the head of the department, in consultation with the dean, may prescribe certain additional specified courses, according to the needs of the particular student.

Registration of Prospective Secondary Teachers

All certificates for teaching, counseling, supervising, administration, and library work in the public schools of Utah are granted by the State Department of Public Instruction.

When all requirements for state certification have been fulfilled, students of the University who are registered in any of its colleges or in the Graduate School will be recommended for certification by the dean of the College of Education. This recommendation will be given just as readily to prospective secondary teachers who have registered in other colleges as to those who have registered in the College of Education, the dean of the College of Education acting merely in an administrative capacity as the representative of the University. However, all students in the teacher certification program, regardless of their college registration, are required to have an assigned adviser in the College of Education to approve the professional education sequence courses. Assignment of education advisers is made in the Teacher Certification Office.

Most students seeking an elementary certificate register in the College of Education. However, programs are available for majors in Human Development and Family Relationships and Speech Correction to obtain an elementary teaching certificate.

Students who desire state certificates should make application with the dean of the College of Education through the Teacher Certification Office and not with the State Department of Public Instruction.

Scholarship Honors

In recognition of especially meritorious work, scholarship honors are granted to certain members of classes graduating with the bachelor's degree. The announcement of honor awards is made at the annual commencement exercises.

There are two designations in recognition of high scholarship merit: Graduation with High Honors and Graduation with Honors. The award of Graduation with Honors is made on the basis of excellence shown in work up to, but not including, the Spring Quarter of the senior year.

A student receiving either type of scholarship honors must rank among the highest ten per cent in scholarship in the graduating class. Graduation with High Honors will be awarded to the highest three per cent, Graduation with Honors to the next seven per cent. This rating is determined by computing a grade-point average as follows: each credit hour of "A" counts 4; each hour of "B" counts 3; each hour of "C" counts 2; each hour of "D" counts 1; "E" counts 0. The total number of points is computed and is divided by the number of credit hours carried.

It shall be the duty of the committee on graduation to make selection of candidates in accordance with these provisions.

The University will post and publish at the close of each quarter of the regular school year the names of the students who have carried a minimum of 15 credit hours and earned a grade point average in all classes carried of 3.5 or above. Those having grade point averages of 3.5 through 3.7 will be on the Roll of Honor and those with grade point averages of 3.8 and above will be designated on the Roll of High Honor.

Residence

The term "residence" has been deleted from this catalog since every course given for credit by Brigham Young University, regardless of the place in which the course is conducted, is controlled by the colleges and their respective departments. The credit course taught away from the campus at Provo, Utah, must fulfill the same requirements made of courses taught on the campus at Provo as to teacher qualifications, course content, course sequence, time allotments, examinations and library facilities. For the convenience of those checking B.Y.U. transcripts of credit, the place in which the course is conducted is indicated. However, all credit courses conducted by Brigham Young University with the geographical location so indicated are accepted by the University as equal to the credit earned on the campus at Provo, Utah.

Evaluation of Transfer Credit

Credit earned at accredited institutions in Utah, Ricks College in Idaho, and other such institutions as may later be determined which offer the baccalaureate or associate degrees, will be accepted hour for hour as the equivalent of that earned at B.Y.U. within the physical, biological, and social science groups, and in the humanities and aesthetics group. Students having such credit will be required to take only enough additional credit within each group to reach the total credit hours required for graduation at B.Y.U.

University Fees

(All fees are payable in advance and are subject to change without notice.)

General Fees

REGULAR COLLEGE AND GRADUATE STUDENTS

	Autumn Quarter	Winter Quarter	Spring Quarter	Total
Tuition	\$55.00	\$55.00	\$55.00	\$165.00
Building, gymnasium, student activity, and health fees	25.00	25.00	25.00	75.00
Total	\$80.00	\$80.00	\$80.00	\$240.00

SPECIAL COLLEGE AND GRADUATE STUDENTS

	Tuition	General Service*	Total
Minimum fee	\$ 8.00	\$ 2.00	\$10.00
Two credit hours	10.00	3.00	13.00
Three credit hours	15.00	4.00	19.00
Four credit hours	20.00	5.00	25.00
Five credit hours	25.00	6.00	31.00
Six credit hours	30.00	7.00	37.00
Seven credit hours	35.00	8.00	43.00
Eight credit hours	40.00	9.00	49.00
Nine credit hours	45.00	10.00	55.00

*The general service fee does not include health service or student activity privileges.

The charge for auditing courses is the same as for taking them for credit.

Private instruction for credit is \$5.00 per credit hour in addition to the instructor's fee, but no late fee is charged if all of the registration is for private instruction only.

REFUNDS — COLLEGE STUDENTS

In the event of withdrawal by either a regular or a special student, a refund will be made on the basis of a charge of \$10.00 for a regular student and \$5.00 for a special student, plus a per day charge of two per cent of the total fees paid for the quarter. The days charged for will be the school days beginning with the first day of the quarter on which classes were held following date on which the student registered to the day on which the student reported his withdrawal to the Office of the Dean of Students, both days inclusive.

No refund will be granted to a student who is requested to withdraw for scholarship or other cause.

The activity or receipt card must be surrendered on receiving a refund.

MISCELLANEOUS GENERAL FEES AND FINES

Graduation fee, bachelor's degree	\$10.00
Graduation fee, master's degree	20.00
(Includes printing of thesis abstract)	

Late application for graduation fee (for those who apply after January 15 for June Commencement and after March 15 for August Commencement)	3.00
Registration for graduation fee (For those not previously registered in the year in which graduated)	2.50
Late orientation fee (charged all freshman and sophomore students registering at the University for the first time who do not report to the campus at indicated time on the officially scheduled day for placement tests and orientation work preliminary to registration day)	3.00
Identification Photo50
Late registration fee (charged all regular and part-time students who register after the days officially scheduled for registration. No exception is made, regardless of the reason for being late. Regular Student: Five dollars beginning the first day after specified registration days and one dollar for each additional day up to a maximum of ten dollars. Special Student: Two dollars and fifty cents the first day after specified registration days and fifty cents for each additional day up to a maximum of five dollars.	2.50 to 10.00
Change of registration fee, for each change slip presented after the first week of each quarter	1.00
Examination, special equivalency, per credit hour	5.00
(The maximum fee in any one subject shall not exceed \$40.00.)	
Duplicate activity card	1.00
Automobile registration and parking fee:	
Beginning of school year	5.00
Beginning of Winter Quarter	4.00
Beginning of Spring Quarter	2.00
Traffic violation fines	1.00 to 5.00
Thesis binding (4 copies)	11.00 to 13.00

FEES FOR INSTRUCTION IN MUSIC

(10 Lessons per Quarter)

Ballou, Richard	\$30.00	Hanson, Wm. F.	25.00
Bos, Jacob	30.00	Keeler, J. J.	30.00
Bradley, Adine	40.00	Laycock, Harold	35.00
Bradshaw, Merrill	30.00	Laycock, Ralph	35.00
Brownlee, Robert	30.00	Madsen, Florence J.	35.00
Buggert, Gustav	25.00	Madsen, Franklin	30.00
Cannon, Clawson	35.00	Mathews, Arminta	30.00
Curtis, Brandt	30.00	Martino, Daniel	35.00
Cheney, Ina Lou	30.00	McAllister, J. W.	30.00
Cundick, Robert M.	35.00	Nelson, Elmer E.	30.00
de Jong, Gerrit, Jr.	45.00	Nordgren, Quentin	30.00
Earl, Don	35.00	Sardoni, Lawrence	35.00
Edlefsen, Blaine	30.00	Terry, Elvis B.	30.00
Fuerstner, Carl	50.00	Wakefield, Homer	30.00
Fitzroy, George W.	30.00	Weight, Newell	35.00
Gates, Crawford	40.00	Weinzinger, Kurt	35.00
Gulbrandsen, Norman	35.00	Woodward, Margaret	30.00
Halliday, John R.	45.00	Woodward, Ralph	35.00

FEES FOR PRIVATE INSTRUCTION IN SPEECH

(10 Lessons per Quarter)

Bateman, LaVar	25.00	Mecham, Merlin J.	25.00
Clinger, Morris M.	25.00	Morley, Alonzo J.	25.00
Gledhill, Preston	25.00	Pardoe, Kathryn B. (12 lessons)	30.00
Hansen, Harold I. (12 lessons)	30.00	Rich, Owen S.	25.00
Jex, Lorin	25.00	Woodbury, Lael J.	25.00

FEES FOR SPEECH CLINIC

An out-patient fee of \$12.00 per quarter is charged for rehabilitation service in the speech clinic. Such service is offered regularly enrolled students without any charge.

FEES FOR DEPARTMENTAL FACILITIES AND SERVICES

English 10 (Preparatory English of sub-college level)	\$10.00
English 15 (Remedial English for juniors)	15.00
Food and Nutrition 240, 340 (Menu Planning and Meal Service)	3.00
Geology 410, 517	10.00
Health Education 110 (Driver Education)	5.00
Horticulture 112 (Flower Arrangement)	5.00
Instruction (Elementary) 447, 448, 449	15.00
Instruction (Secondary) 377, 478, 479	15.00
Nursing 211, 212 (Fundamentals Laboratory)	1.50
Nursing 485 (Public Health Nursing Laboratory)	30.00
Physical Education 131, 132 (Golf)	7.50
Physical Education 135, 136 (Skiing)	10.00
Physical Education 137 (Outdoor Experience Through Organized Hiking)	5.00
Physical Education 160, 161 (Swimming)	10.00
Physical Education 164 (Life Saving)	10.00
Physical Education 165 (Water Safety Instruction)	10.00
Physical Education 166 (Canoeing)	7.50
Physical Education 222 (Men) (Skills and Techniques)	6.00
Recreation 121 (Bowling)	8.00
Recreation 123 (Skills and Techniques for Outdoor Recreation)	12.00
Recreation 137 (Outdoor Experience Through Organized Hiking)	5.00
Recreation 138 (Outing Activities)	5.00

RENTALS

Woodwind, brass, and string instrument rental per instrument per quarter	\$ 8.00
Harp, harpsichord, organ rental, one hour each day, per quarter	10.00
Piano rental, one hour each day, per quarter	5.00
Each additional hour per day, per quarter	4.00
Practice room without a piano, one hour each day, per quarter	3.00
Each additional hour per day per quarter	2.00
Locker rent (McKay Building and Eyring Science Center):	
1 quarter	1.00
3 quarters	2.50
4 quarters	3.00
Key deposit	1.00
Replacement of lost key50
Locker rent (for high school students, Education Bldg.) school year	1.50

Fifty cents is returnable on return of key. If students share a locker there is an additional 50c for each additional key issued. The 50c for each such key is refunded on return of key.

DEPOSITS

Gymnasium towel check and padlock deposit	3.00
(Maximum refund is \$2.50)	
Botany 175 (Microtechniques)	2.00
Botany 550 (Plant Physiology)	2.00
Botany 706 (Experimental Ecology)	2.00
Botany 712 (Plant Nutrition)	2.00
Industrial arts and drawing	1.00
Chemistry (each laboratory class)	1.00
Civil Engineering 202, 203, 204	1.00
Air science (All AFROTC students)	14.00

(Fifty cents per quarter will be retained for flight insurance.)

Fees for Laboratory Schools**SECONDARY SCHOOLS**

Senior high school—10th, 11th, and 12th grades	\$30.00
Junior high school—7th, 8th, and 9th grades	\$20.00
Special students in Secondary Laboratory School, per unit	7.50

Secondary laboratory school students who register any time during the first semester shall pay the full year's fees. Those who register the second semester in the junior high school shall pay \$11.00 and in the senior high school \$17.00, which amounts include the late fees.

A high school student authorized to register for college courses shall pay in addition to the high school fees \$4.00 per credit hour, but the maximum charge for the high school and college courses shall not exceed that charged a college student for the same period.

ELEMENTARY SCHOOL

Kindergarten to the sixth grade, for the full year	\$15.00
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Elementary laboratory school students who register any time during the first semester shall pay the full year's fee. Those who register during the second semester shall pay \$8.50, which includes the late fee.

LATE FEE IN LABORATORY SCHOOLS

A late fee of \$2.00 will be charged all junior and senior high school students who register after the first week.

A late fee of \$1.00 will be charged all elementary training school students who register after the first week.

Refunds—Laboratory Schools

A refund of \$25.00 will be made to any senior high school student who withdraws during the first or second week of the first semester. A refund of \$15.00 will be made to any student who withdraws after the second week and on or before the end of the first semester, but no refund will be made thereafter.

A refund of \$15.00 will be made to any junior high school student who withdraws during the first or second week of the first semester. A refund of \$10.00 will be made to any student who withdraws after the second week and on or before the end of the first semester, but no refund will be made thereafter.

A refund of \$5.00 will be made to any elementary training school student who withdraws before the beginning of the Christmas holidays, but no refund thereafter.

No refund will be granted to a student who is requested to withdraw for scholarship or other cause.

The activity or receipt card must be surrendered when a refund is received.

COLLEGE OF FAMILY LIVING NURSERY SCHOOL

Fee per child, per quarter\$20.00

Estimated Cost of Attending B.Y.U. For Three Quarters, 1958-59

The expense of a year's study at Brigham Young University is surprisingly reasonable. It will depend a great deal on how much a student can or wants to spend. Basic minimum costs for a three-quarter school year are:

Tuition	\$165.00
Building, student activity, health and gymnasium fees — \$25 per quarter	75.00
Books and Supplies	60.00
Board and Room	540.00
Personal Expenses	100.00
TOTAL	\$940.00

A recent nationwide study of the costs per year for tuition, board and room, and fees at private colleges indicates average spendings of \$1,485 per student. This amount, which does not include personal expenses, is nearly twice as large as comparable costs at B.Y.U.

The estimate of \$940 does not provide for an automobile or clothing or transportation from distant points. The cost will obviously vary with married or single students and with young men or young women. For those doing their own housekeeping, either on or off the campus, the cost of board and room can be materially reduced. Some students without automobiles have spent for an entire year as little as \$750. Others with automobiles have spent as much as \$1,500. Except for those who travel back and forth to their homes each day, an automobile is unnecessary and often a hindrance to proper study.

Student Personnel Services

The Division of Student Personnel Services is responsible for the welfare of students in the following areas of university life:

Academic Standards
Counseling Service
Financial Aids
Foreign Students
Health Services
Indian Students
Information Center
Orientation
Scheduling

Scholarships, Fellowships, Assistantships, and Academic Grants
Security and Traffic
Student Employment and Placement
Student Housing
Student Organizations and Social Life
Student Publications
Veterans' Affairs
Women's Activities

Dean of Students

The dean of students is director of the special services of the University. As such, he is expected to coordinate the agencies at work on student problems. He initiates and recommends to the President and the University Council needed policies and procedures in student life. It is his responsibility to administer the program recommended or approved by the President in the various areas of Student Personnel Services.

Counseling Service

Administrative officers of Brigham Young University are well aware that new students are faced with many problems as they begin their college careers. The Counseling Service has been established to meet the needs of students in making and maintaining a satisfactory adjustment to college life.

As each student enters the University, he is assigned to a professional counselor. All entering students are expected to contact their counselor so that they may avail themselves of professional assistance. The Counseling Service provides the following services for the University: (1) counseling service—educational, vocational, and clinical, (2) testing service, (3) occupational information service and (4) help with study skills.

The Counseling Service offers assistance to each individual student in helping him to make wise decisions in connection with educational, vocational, and personal problems.

Personnel tests of achievement, ability, interest, and adjustment are given to all new lower division students. The data from these tests are used as a basis for counseling in educational, occupational, and personal problems. Although the basic tests are given to all new lower division students, upper division and graduate students may avail themselves of the tests. The testing service provides psychological test data for the use of counselors and registration advisers, placement tests for various academic groups at the University, and assistance in the preparation, administration, and scoring of subject-matter tests requested by various departments in the University.

A comprehensive, current coverage of essential occupational information is maintained in the Counseling Service Library. Current catalogs of the major universities and technical schools are also on file. A study skills laboratory is maintained for use of all students in the improvement of their study habits. Remedial reading groups are formed each quarter to give assistance to students who have

difficulty in reading in the college texts. Emphasis in the reading groups is placed on improving the students general reading ability, not on speed alone. Application for membership in these groups is initiated by contacting the Counseling Service receptionist. Reading materials and equipment are also available to help the student increase his ability to read.

Counselor for Women

Of special assistance to women students is a counselor for women. She is a member of the Committee on Student Personnel Services and chairman of the Committee on Women's Affairs. The counselor for women is available throughout each day to assist women students in solving personal problems.

Foreign Students Adviser

Services of the foreign students adviser are available to all students from countries outside of the United States. All alien students are expected to clear with him. Foreign students coming to the University should report first to Room 2254, Joseph F. Smith Family Living Center, the office of the adviser to foreign students.

Veterans' Benefits

Veterans transferring their G. I. benefits from other schools to B.Y.U. must bring a certificate of eligibility restricted to B.Y.U. This must be obtained by application to the last school attended. New veterans must make an application for eligibility. War orphan veterans should apply at the Veterans' Administration Office in their home state. Veterans of the Korean War may make their first application upon their arrival at the university by presenting their discharge form, DD-214. Veterans of the Korean War must begin use of their G. I. benefits within three years of their date of discharge. After this date they cannot suspend training for a full calendar year at any one time without receiving special clearance. Inquiries should be directed to the veterans' coordinator, Brigham Young University, Provo, Utah.

Scholarships, Awards, and Financial Aids

The University awards annually to undergraduate students scholarships covering from one to three quarters' tuition each, granted on the basis of outstanding academic ability or demonstrated academic ability and outstanding ability in the areas of speech, drama, music, art, athletics, and other subjects. Tournament and contest winners frequently receive these awards.

The University also awards grants-in-aid to deserving students of good academic ability who have economic need. To be eligible for a grant-in-aid, an athlete must meet either of the following requirements:

1. If a freshman, he must have been rated academically as in the upper two-thirds of his school graduating class. For the first year such award shall be made for the entire school year.
2. If not a freshman the student must be in good academic standing and not on probation. Such award shall be made on a quarterly basis.

A considerable number of loans are made to worthy and needy students. These are available to all students on the basis of their qualifications and need for financial assistance.

Scholarships and grants-in-aid are applied toward the payment of tuition or fees. Any scholarship or grant-in-aid may be withdrawn at any time for academic

or other good and sufficient reasons if, in the judgment of the selecting committee, the recipient has clearly demonstrated his failure to comply with both the spirit and the letter of the original terms of the scholarship or grant in-aid.

Graduate students also are eligible for scholarships, fellowships, and grants. For further information see the Graduate Catalog.

All scholarships, fellowships, assistantships, and academic grants are under the jurisdiction of a central committee which alone has the authority to promise or grant an award. All applications for these recognitions should be made to the chairman of the Committee on Scholarships and Awards.

Discipline

The maintenance of standards of honor and integrity, of graciousness in personal behavior, of Christian ideals in everyday living, of a high standard of morality, and of abstinence from alcohol and tobacco is required of every student. A student's having improper associates or visiting places of questionable repute will not be tolerated.

Any pronouncement of disciplinary measures made by the President of the University becomes a part of these regulations. Violations of regulations may make the offender liable to suspension or expulsion from the University.

Academic Standards

Students at Brigham Young University are required to demonstrate scholastic proficiency. Those who fail to meet the following requirements shall be subject to suspension from the University for low scholarship:

1. The academic standing of a student attending B.Y.U. shall be based upon the cumulative grade-point average earned at the University. Grade point averages are computed on a basis of 0 for E's, 4, 3, 2, and 1 points for each credit hour of A, B, C, and D respectively.
2. First quarter freshman students who have accumulated 18 quarter hours or fewer are required to maintain a 1.5 grade-point average. All other freshmen and sophomores (19-93 hours) are required to maintain a 1.75 grade-point average. All juniors, seniors and graduate students (94 hours or more) are required to maintain a 2.0 grade-point average.
3. Class standing is based upon the number of credit hours a student has accumulated prior to the beginning of the current academic quarter.
4. A student failing to meet the minimum standards of his class shall be placed on academic warning.
5. Students who fail to achieve a 1.0 cumulative grade-point average shall be placed on academic probation.
6. Students on academic warning who fail to achieve a current quarter 1.00 grade-point average shall be suspended from the University for low scholarship.
7. Students who fail while in an academic warning status to achieve the minimum grade-point average for the current quarter as required for their particular class shall be placed on academic probation.
8. Students on academic warning may remain in this status as long as they maintain the minimum current-quarter average for their class. Students on academic probation must have their record cleared from probation at the conclusion of the academic quarter during which they were placed on probation, or they shall be suspended for low scholarship.
9. Students on academic probation who fail to meet the minimum grade-point average for their particular class shall be suspended from the University for low scholarship.

10. Students admitted to the University in an academic probationary status are required to meet the minimum academic grade-point average for their particular class. Failure to do so will result in their suspension from the University for low scholarship.
11. Students readmitted to the University who were on academic warning or probation when they left the University are required to meet the minimum academic standards for their class. Failure to meet this requirement will result in the student's suspension from the University.
12. Students on academic warning shall not be permitted to register for more than fifteen credit hours, and students on academic probation shall not be permitted to register for more than fourteen hours. Any exception to this rule must be authorized by the dean of the college in which the student is registered.

Placement Bureau

The Placement Bureau, located in the east end of the Herald R. Clark Student Service Center, exists on the campus for the purpose of assisting graduating students and alumni to find desirable positions in their fields in business, industry, government, and education. This office works in close cooperation with deans and department chairmen.

The placement service includes a placement library where interested students may find books, articles, magazines, and brochures that will acquaint them with companies in which they may be interested and also books and pamphlets which will give advice on such matters as how to conduct oneself in an interview, how to write effective letters of application, how to find employment, etc.

All students are urged to register with the Placement Bureau early in the school year in which they will graduate so that that office may prepare early to give the most effective possible assistance in finding employment for each graduate.

Student Employment

In the Placement Bureau assistance is given to students in finding part-time employment. This includes help not only in placing students in positions on the University campus but also in finding part-time employment off-campus and in finding work for board and room.

Students are encouraged not to attempt to earn their entire way through school. Such a program leaves little time for academic work (See scholarships). It is important to note that there is a maximum limit on the number of hours which a student may work on-campus.

Students are urged to register with the Placement Bureau as soon as possible after they arrive in Provo and are available for work. Factors which weigh most heavily in deciding who shall receive leads for jobs are need, hours available, and possession of skills required by employers. Inasmuch as the number of students seeking part-time work is very high, those whose need is great are requested to report regularly at the Placement Bureau after filing their initial applications.

Students from foreign countries are required to obtain a work permit before they may take employment. Such students may receive assistance in obtaining the necessary permit from the foreign students adviser. Students under eighteen who succeed in locating employment are required to obtain a work permit. Instructions concerning this are available in the Placement Bureau.

Student Health Service

The new Howard S. McDonald Student Health Center on University Hill accommodates the health services, comprised of a large out-patient clinic and a small in-patient unit for cases requiring bed care. The center functions 24 hours daily, 7 days a week during school terms and is available to any regularly enrolled full-time or part-time student whose fees include the services for the quarter in which he is registered. Summer students are included. Medical care to all eligible students is limited to the facilities and personnel in the health center.

The following services are provided without extra charge:

1. An initial complete physical examination, required of all entering students, to be performed at the health center and to include screening chest X-ray, audiometry and urinalysis. This examination is also mandatory for students re-entering after a two-year absence.

2. Consultation with general physicians and specialists, by appointment, in the health center during regular clinic hours, 8 a.m. to 5 p.m. This includes a specialty clinic in orthopedics, general surgery, gynecology, eye, ear, nose and throat disease, and internal medicine.

3. First aid treatment any time during the twenty-four hours of each day.

4. Special immunizations as required for smallpox, diphtheria, or typhoid.

5. Physical therapy as recommended by a health center physician.

6. Routine laboratory tests.

7. Seven days of bed care in any one quarter in the health center, as recommended by a health center physician, after which a minimum charge of \$2.50 per day will be made. This includes post-surgical convalescence, the private physician continuing in attendance.

8. Immediate notification of parents or guardian by the health center when a student is taken acutely ill.

9. Certain procedures of public health importance, such as tuberculin tests, follow-up studies in infectious diseases, etc.

10. Within the limits of its personnel and facilities, and at the discretion of the director, the treatment of chronic disease suffered by students.

Some services require an additional charge and are supplied to the student at cost. These are:

1. Meals while a patient is in the center.

2. Drugs on prescription of a health center physician.

3. Special diagnostic laboratory tests.

4. Poliomyelitis vaccination upon authorization by parent or guardian.

5. X-rays other than "screening" films. The health center regularly employs the technical personnel to take and interpret the X-ray films. The student pays only the cost of materials.

6. After-hour calls by a physician either in the clinic or at home. The student pays \$2.00, the health center \$3.00 for each call.

7. Rental of crutches.

Services not available:

1. Major surgery or off-campus hospitalization, except in instances where an injury is sustained while the student is representing the University through official assignment.

2. Dental service.

3. Obstetric services.

4. Eye refractions, glasses, prostheses, hearing aids, etc.

5. Ambulance service.

Program and Personnel for Student Housing

The directors of Program and Personnel for men's and women's housing are responsible for the social, spiritual, cultural, and educational aspects of housing. They are responsible for the initiation and coordination of the residence hall program in cooperation with the other departments of the school and for the supervision of the head and senior residents. They are available for general counseling on residence hall and other problems which students must solve in the school process. Roommate requests should be made through the directors.

Each campus residence is under the supervision of a competent head resident, a head resident couple, or a senior resident, generally responsible for the personal welfare and for implementing the residence program. Among other things, the residence program provides experience in democratic self-government, acceptance of responsibilities that go with maturity and independence, assistance in learning the arts and science of human relationships and of working and living with others. It assists the student to achieve a sense of belonging and to develop social competence through a social and recreational program. Head residents give general counseling to the student in cooperation with academic and other personnel services. In addition, students in Heritage Halls may receive help in the home-making experiences of budgeting, buying, meal planning, and care and selection of clothes through the services of specialists assigned to that area.

The directors of Program and Personnel are responsible also for a program designed to assist students living off campus to make their housing experience more meaningful. They are available for counseling in special problems related to off-campus housing.

For information on types of accommodations, rates, and food service see Auxiliary Services Section.

Security and Traffic

The Security Office is a protective agency for students, faculty and staff. Any questions concerning security or requiring police action should be referred here.

This office also maintains a lost and found service. Items of value found on campus should be deposited here at once. Unclaimed property will be held six months only.

A major responsibility of the Security Office is the directing of campus traffic and parking. Students, faculty, and staff are required to register their motor vehicles at the time of registration or employment at the University. Any change in ownership or registration must be reported to the Security Office within forty-eight hours. All vehicles must display a registration or parking permit. Vehicles parked on campus between 7:00 a.m. and 5:00 p.m. when school is in session must display a parking permit. Student parking fee is \$5.00 per year.

Student Organizations

Student activities are organized in such a way as to offer maximum opportunity for training in leadership and self-government and to provide a well-balanced program of individual and group development. Numerous student organizations have been set up to realize effectively such an objective. All student organizations on the campus conduct their affairs in accordance with a basic philosophy designed "to provide for a broad program of social, cultural, and recreational opportunities in which students are encouraged to participate." Membership is open to students who qualify and remain qualified according to the rules and regulations set up by each organization. All students are urged to become affiliated with some group and thereby derive the benefits that only group experiences can bring. In order to coordinate organizational activity, to eliminate duplication of effort, and to lend continuity from year to year, supervision of

student organizations is provided by the dean of students through the office of the coordinator of student organizations.

Associated Students. This organization is composed of all students who attend Brigham Young University and is presided over by officers elected by them. It seeks to develop interest on the part of every student in those activities which contribute to a more democratic "Y" spirit and to provide opportunities for all students to participate in a well-rounded program of out-of-class activities. Through this organization, student traditions are kept alive and all interclass and intercollegiate activities are encouraged and unified. Social, forensic dramatic, and musical activities are fostered under its management, and through it the students publish the *Daily Universe*, the *Wye Magazine*, the student directory, and the *Banyan*. The organization also functions as an auxiliary of university discipline through the activities of the Honor Council and the Inter-Organizational Council court system.

Associated Men. All men students registered are members of the Associated Men. This organization is designed to promote specific interests of "Y" men and to foster a wholesome atmosphere on the campus. The Executive Council, consisting of three student leaders and a faculty counselor, supplemented by the twelve members of the "Y" Men's Council, forms the governing group.

Associated Women. This is an organization comprising all women registered in the University. Its purpose is to aid and foster all women's activities. The organization, advised by the counselor for women, is a member of the Western Division of the National Organization of Associated Women Students, which includes most of the universities and colleges in the United States.

Class Organizations. Members of the four classes and the Graduate School are organized for the purpose of developing common interests and class spirit as the class proceeds through the University and into the Alumni Association. Meetings of the classes are held periodically with a limited number of social functions planned by class officers.

Executive Council. This council consists of the president, vice-president of social activities, vice-president of student relations, vice-president of cultural activities, and vice-president of finance.

Student Senate. This is a legislative body consisting of representatives from the entire student body and representatives from the classes. The senate considers student body problems and initiates action for the welfare of the student body.

Inter-Organization Council. This is an organization composed of representatives from student organizations to help govern organization activities. It derives its authority from the Executive Council.

Honor Council. This is a group of sixteen students appointed by the student senate and functioning as a counseling body with sub-committees to promote the honor system, to which all students are expected to adhere.

Student Publications

Under the supervision of the Student Publications Committee, composed of both student and faculty representatives, four publications are sponsored in order to serve the University and its students and to give opportunity for student expression and development through publications activities.

Newspaper. The Brigham Young *Daily Universe* is published daily during Autumn, Winter and Spring Quarters and weekly during the Summer Quarter. Opportunity is given students for valuable experience in news writing, editing, photography, photo-engraving, and advertising.

Yearbook. Named for the oriental tree which symbolizes the widening friendships formed on the campus, the *Banyan* is the students' photographic and

artistic record of each year's activities. Portraits of all students and faculty members are included without charge to the individuals.

Magazine. The *Wye*, published quarterly, contains student-written poetry, stories, and non-fiction. Several awards are given for the best art work, photography, and writing published.

Directory. An annual directory of Brigham Young University students and faculty is published in the Autumn Quarter. Compilation of the directory material and sale of copies are sponsored by White Key, women's honorary service organization.

Professional and Departmental Organizations

The University encourages organizations which have the specific purpose of bringing together persons of similar scholastic and professional interests and of rendering their work more pleasurable and profitable. Each group fosters the activities of the department to which it is allied. Eligibility requirements are those of departmental affiliation and general scholarship as determined by the individual organizations. Fees are reduced to a minimum. Each organization has a faculty sponsor.

Service Organizations

There are on campus several organizations, the primary function of which is to render service to the University. Some of these are for men and some for women. Eligibility requirements are established by each organization and each has a faculty sponsor.

Social Units

Within the program of student organization, provision is made for men's and women's social units. Activities in these organizations are provided in accordance with the basic philosophy of student organizations and are established on the basis of common social interests, friendship, congeniality, and cooperativeness. These organizations furnish numerous opportunities for student participation both individually and in groups. The competitive spirit is fostered in such activities as the Homecoming Parade, the Song Fest, and the Snow Carnival.

Geographical Organizations

Geographical clubs are organized to further social enjoyment and acquaintance among students from the same localities. They are particularly helpful to students during the early quarters of school, before these students have found their way into the other social activities of the campus. Such clubs are also helpful in maintaining a close bond of interest between the student and his home.

Non-Student Organizations

B.Y.U. Women. The purpose of this organization is to foster the ideals of the institution and to help furnish recreation and social amusement for the faculty. A woman is eligible for membership in this organization and becomes a member on payment of dues provided that at the time she seeks admission she is either (1) a present faculty member (A faculty member is one who holds at least the rank of instructor.); (2) a past faculty member; (3) a matron; (4) a board member; (5) the wife of a faculty member who has died in the service of the school; (6) the wife of a present faculty or board member.

The Society of the Sigma Xi. This is a national organization devoted to the

encouragement of research in pure and applied science. The local unit is known as the Brigham Young University Chapter.

Members of the Society of the Sigma Xi on the staff at Brigham Young University organized a Sigma Xi club in 1935. Since that time it has remained continuously intact, encouraging research and other activities in the various branches of science. A petition for chapter standing was submitted by the local club in 1949. A chapter was granted by the National Society of the Sigma Xi. Formal installation took place October 17, 1950.

Specific local projects include the sponsoring of national Sigma Xi appointed lecturer, the promotion of several lectures by prominent scientists within the unit and from nearby institutions, an annual Sigma Xi lecture by a member of the chapter, the awarding of an annual medal to an outstanding student for the completion of a research project, and the direction of possible sources of research funds in the interest of pure and applied science.

Religious Opportunities

Brigham Young University students have excellent opportunities for participation in religious activities. Among the means available are the following:

Brigham Young University Stake. This stake of eighteen wards, organized specifically for students, provides maximum opportunity for active participation in the program of the Church. Spiritual growth and the development of a strong testimony are goals fostered by the stake organization, whose program is closely integrated at all levels with that of the University.

All single students living away from home establish their membership records in one of the wards of the Stake. Married students who attend the University may elect to have their membership records either in a ward of the B.Y.U. Stake or in a nearby ward in which they reside. Membership records of students remain in the B.Y.U. Stake until they terminate their schooling at the "Y".

Religious Organizations. In addition to the eighteen wards on campus, there are several organizations which are primarily religious in nature but which are also social and service groups. Membership in some of these organizations is limited to returned missionaries while others are open to any interested student.

Devotional Assemblies. Devotional assemblies, held each Tuesday, enable students to hear messages of spiritual power and depth from carefully chosen church leaders. It is contemplated that during each year all members of the First Presidency and of the Quorum of The Twelve Apostles will address the student body in the Tuesday devotional assemblies.

Student Assemblies

Throughout the academic year a student assembly is held each Thursday at 9:00 a.m. as a part of the regular program of the University. The Thursday hour, set aside for outstanding student entertainment, is an important part of student life and should likewise be a definite part of the student's schedule. Interspersed with the student productions and devotionals are forum assemblies and lyceums featuring noted people from all walks of life.

Lyceums

Almost since its founding Brigham Young University has been bringing to its students distinguished men and women in arts and letters. During the 1957 Summer Quarter and the 1957-58 season, the following have appeared or are scheduled to appear:

Gina Bachauer	Pianist
Lorraine Bowman (summer)	Clinic Choral Conductor
Concordia Choir, Paul J. Christiansen, conductor	
Max Dalby (summer)	Clinic Band Conductor
Howard R. Driggs (summer)	Lecturer

Zino Francescatti	Violinist
Flo French (summer)	Guest Actress
Viktor Fuchs (summer)	Lecturer and Guest Conductor
Carl Fuerstner (summer)	Pianist
Fernando Germani	Organist
Gary Graffman	Pianist
Jose Greco and Dance Company	
Katherine Hilgenberg (summer)	San Francisco Opera Company Contralto
Anna Julia Hoyt (summer)	Mezzo Soprano
Amparo Iturbi	Pianist
Archie Jones (summer)	Clinic Orchestra Conductor
Raymond Manton (summer)	San Francisco Opera Company Tenor
Marais and Miranda	International Balladeers
Frederick Muller (summer)	Clinic Choral Conductor
The New Art Wind Quintet (summer)—four concerts—	Martin Orenstein, Melvin Kaplan, Charles Russo, Morris Newman, Robert Cecil
Paganini Quartet (summer)—10 concerts—	Henri Temianka, Charles Foidart Gustave Rosseels, Lucien Laporte
Carl Palangi (summer)	San Francisco Opera Company Baritone
Sally Peck (summer)	Violinist with Paganini Quartet
Blanche Thebom	Metropolitan Opera Mezzo Soprano
Leonard Warren	Metropolitan Opera Baritone
Utah Symphony Orchestra, Maurice Abravanel, Conductor	
Utah Talent Night	

Alumni Association

The Brigham Young University Alumni Association was organized in 1893 to "promote the general welfare of Brigham Young University."

During the sixty-four years of its existence, it has assisted the University in many ways: the Maeser Memorial Building was built with funds from alumni; part of the property on which the upper campus now stands was obtained by the Alumni Association and turned over to the University, and eighty additional acres were purchased by the Church at the suggestion of alumni leaders; a permanent endowment fund was established in 1929 which now exceeds \$31,000; the Student Union Building fund, started during World War II, now exceeds \$90,000 and has grown primarily from contributions of Alumni; the fieldhouse fund drive was supported by the Alumni Association; funds in cash have been turned over to the University at various times for unrestricted use; and the alumni have played a vital part in stimulating interest in Brigham Young University through contacts with prospective students, etc.

The Alumni Association has cooperated in organizing The Brigham Young University Fund, a department of the University which has as its sole function the responsibility of a long-range fund-raising program for the institution. It is hoped that through this new fund the University will receive gifts and contributions which will enable it to improve and enlarge its educational offerings. During the initial year of the fund which ended August 31, 1956, a total of 2,642 alumni contributed \$22,023.75 to the University, and an additional 26,496 alumni contributed \$20,673 in 1956-57.

Alumni of the University are located in all forty-eight states, five United States territories and possessions, and twenty-seven foreign countries. Stake and mission presidents of the Church appoint alumni in their respective stakes and missions to serve as B.Y.U. coordinators, and these coordinators organize and conduct alumni activities in their areas. These coordinators are also members of the Alumni Council, governing board of the Alumni Association. The Alumni Council meets twice each year, during the weeks of April and October L.D.S. general conferences. Routine matters of the association are handled by an eighteen-member executive committee, headed by a president, two vice-presidents, a treasurer, the president of the Emeritus Club (composed of alumni who were at the University fifty or more years ago), and a full-time executive secretary.

Members of the Executive Committee are selected each year to serve terms of three years. Members of the Executive Committee are also members of the Alumni Council.

Anyone who has attended the University for one quarter or more is a member of the Alumni Association. There are no annual dues or membership drives, except that the Alumni Association solicits contributions for the Brigham Young University Fund. All contributions to this fund are tax-deductible and entitle the donor to receive publications of the University and the Alumni Association, including the *Alumnus Magazine*, which is issued bi-monthly except during the summer.

Homecoming, in the fall, and Alumni Day, during Commencement Week, are the two major events of the year on campus for alumni. Periodic reunions of all graduating classes are held on these two days. Meetings are also held throughout the country by alumni living in local areas.

The Alumni Association maintains permanent records of all former students of the University and a full-time office staff on the campus. If the current address or other information is needed about a former student, correspondence should be addressed to the Alumni Office. Alumni visiting the campus are invited to visit the Alumni Office and to make it their headquarters while in the area.

The Alumni Association is a member of the American Alumni Council, an organization composed of alumni associations of all the major universities and colleges in the United States, Canada, and Mexico.

Auxiliary Services

Student Housing

All students at the University are required, as a condition of enrollment, to live in University-approved housing, whether it be on or off campus. The Office of Student Housing, established to assist students with their housing needs, is located in the Herald R. Clark Student Service Center. All inquiries or administrative problems relating to housing needs should be referred to this office.

HOUSING RENTAL AGREEMENTS

Students planning to live either in campus housing or off-campus housing may expect to sign a rental agreement for the accommodations they will occupy. Students should be prepared to live by the terms of these agreements once they have signed them. Many misunderstandings and financial losses can be avoided by students if they will read and familiarize themselves with the terms of the agreement before signing.

A word of caution: Housing is such an important part of the total experience of the student at the University that he should give thoughtful consideration to the type of housing desired before he enters into the rental agreement. Further, to avoid discomfiture and possible loss of money, each student should be sure that the accommodations under consideration have been approved by the University.

Campus Housing

APPLICATIONS

Students who enroll at the University and who wish to live in University residence halls should make inquiry at the earliest date to the Office of Student Housing. A housing application form will be forwarded to each inquiring student. A \$10.00 application fee should be enclosed with the completed application form when it is returned to the Office of Student Housing. Residence hall assignments and appropriate "agreement forms" are prepared on a basis of the date of receipt of the application form by the Housing Office.

ACCEPTANCE

The validating of any campus housing reservation is contingent upon the student's official acceptance and admission to the University.

RESIDENCE HALLS FOR WOMEN

Housing for 1,539 women is provided in 24 Heritage Halls. These are apartment-type buildings. Each apartment consists of a combination kitchen-dining-study room arrangement, three bedrooms, and a bath. In addition, there are large living rooms, a recreation room, and laundry and storage facilities in each building. Six girls occupy an apartment and live cooperatively, preparing their own meals. The apartments are completely furnished except for bedding, kitchen utensils, and dishes. The facilities are excellent and offer a high standard of living for college students. The approximate annual rate for these accommodations is \$225.00.

Each hall is under the supervision of a head resident couple, generally responsible for the personal welfare and social life of students in the hall. Help in the homemaking experiences of budgeting, buying, meal planning, and the selection, care and construction of clothing is available from specialists who are assigned to the Heritage Halls. In addition, a specialist is available to assist students in planning social activities, developing recreational skills, and learning wise use of leisure time.

The University operates two residence halls for women where board and room are provided. These two halls, Amanda Knight Hall and Knight-Mangum Hall, house 418 students. The halls, completely furnished, provide every modern convenience, including well-planned food service. Students are under supervision of a trained head resident. The approximate annual rate for these accommodations is \$540.00.

Each women student who desires to live on campus should consider carefully the type of accommodations desired in view of her economic needs, time available for activities within her housing situation and type of experience desired. Agreements are made for the year, and moving from one type of accommodation to another during the year is not permitted.

RESIDENCE HALLS FOR MEN

Board and room services for 97 men are provided in a traditional type residence hall, the Allen Hall, located one block from the campus. It provides sleeping rooms, dining hall, living and social room, study room, adequate laundry and storage rooms.

Board and room services for 1170 men will be provided for the first time in the fall of 1958 in six new buildings. These buildings form a beautifully designed residence hall development located to the north of the George Albert Smith Field-house. There are five residence hall buildings, conveniently grouped around an attractively planned and developed central building. Each residence hall accommodates 234 students, with two men sharing each bedroom. In addition, living rooms, study rooms, central shower areas, recreational rooms, adequate laundry and storage facilities, and a head resident couple apartment comprise each building. These halls will provide some of the best student living experiences offered on any University campus. The central building contains spacious dining rooms and a snack bar, providing the excellent food service for which the B.Y.U. is noted. In addition, this building contains beautiful living rooms, recreational areas, administrative offices, and other management facilities such as mail rooms, gun storage areas, and laundry and dry cleaning pick up stations.

Adequate adult head resident and student senior resident personnel live in all halls to provide leadership and direction in the personal welfare and social life of each student. Student government and councils are organized to aid the head residents in administering good living practices in each hall. The residence halls for men at B.Y.U. offer rich character-building experiences. The approximate annual rate for these accommodations is \$540.00.

APARTMENTS AND HOMES FOR MARRIED STUDENTS

Family accommodations for 350 married couples and their children are provided in housing developments known as Wymount Village and Wyview Village.

The Wymount Village consists of 200 apartments (efficiency, one-bedroom and two-bedroom). These buildings were acquired from the federal government and moved to their present site following World War II. The maximum monthly rental rate approximates \$40.00.

The Wyview Village consists of 150 prefabricated homes purchased in 1956 from a federal government airbase and moved to a site adjacent to the campus. There are 100 two-bedroom and 50 three-bedroom homes. The monthly rental rates approximate \$45.00 for the two-bedroom and \$50.00 for the three-bedroom home. Each family, in addition, will pay for its own electricity.

Applications for apartments or homes are placed on the waiting list according to the size of the family needing accommodations. There is a six-month waiting list at the present time.

Note: The Off-Campus Department of the Student Housing Office can assist married students to find suitable apartments in the Provo community. Approximately 1,000 units are available to married couples.

Off-Campus Housing

Off-campus housing consists of apartments, rooms with kitchen privileges, board and room, and sleeping rooms. These facilities are inspected by the University to see that they comply with established standards before they are approved for student occupancy. Through the cooperative efforts of both the householders of the community and the University, constructive action has been taken to raise the standards of student housing throughout the community. Before making any commitments for off-campus housing, students should make sure that the place they contemplate living in has been approved by the University. The Off-Campus Department of the Office of Student Housing maintains up-to-date listings of approved residences. This office is established to assist students upon their arrival on campus to find suitable quarters, if students desire to reside in the community.

RATES

Rates for off-campus housing accommodations vary with the type of service provided, and as a consequence only a general indication can be given here. Sleeping rooms rent from \$13 to \$20 a month. Apartment accommodations run from \$14 to \$25 per month per student. Board and room are available at from \$50 to \$65 a month. Apartments for married students can be obtained at a rate of approximately \$45 to \$70 per month.

Food Service

Regular meal service is provided for students at five different cafeterias on the campus. Four of these are operated as part of the board and room service of residence halls. It is possible for students living off campus to buy meal tickets at reduced prices and eat in one of these places. The fifth cafeteria is in the Joseph Smith Building, where meals are served at reasonable prices on a cash basis.

The University also operates three snack bars where food service is available throughout the day. Food may be secured through vending machines located throughout the campus. Costs of meals and food service are kept as low as possible, consistent with sound operating management.

The University also operates a creamery where milk, ice cream and other dairy products may be purchased by students and faculty at very favorable prices. Students preparing their own meals find this service both desirable and economical.

Photo Studio

Located in the Eyring Science Center is a modern, fully equipped portrait and commercial photo studio, established to provide economical photographic service to students, faculty, and administrative departments. This studio has served the campus for twenty-five years. Any student or faculty member may take advantage of the services offered by the up-to-date department.

In recent months, the addition of \$12,000 in new production equipment has made possible modern techniques in photographic production, thus increasing quality and efficiency. Any photographic need may be satisfied by the present studio.

Post Office

The Postage and Mailing Department is located in the Student Service Center. Its function is to pick up and deliver all of the inter-campus mail, to sort and

deliver all U. S. mail received by the University, and to pick up and meter all of the outgoing U. S. mail. Two deliveries and three pick-ups are made each day on the campus.

Directory service is available for all mail addressed to Brigham Young University that does not indicate the department for which it is intended. This is true also for mail sent to students c/o Brigham Young University.

A U. S. Post Office Branch, Station 1, is located in the Student Service Center, where students can pick up and send mail. Individual rental boxes are available for student use.

Purchasing Department

The Purchasing Department is located in Room 272 of the Student Service Center. The function of the department is one of service. Its aim is to get the materials needed, when needed, at the most economical price and to maintain good public relations between the University and the suppliers.

Its services are designed to relieve faculty, other members of the University staff, and the Associated Student Association from certain duties of procurement. Through this department, all purchase orders are issued for equipment, supplies and services for the University. Off-campus requisitions are received from the various departments authorizing the expenditure of budgetary funds.

The Student Supply Association (bookstore) is operated independently and does its own buying. Inter-departmental purchasing is done by means of a campus purchase order, which is sent directly to the selling department—i.e. bookstore, Y Press, Food Services. These campus purchase orders are not processed by the Purchasing Department.

Stores and Receiving

The Stores and Receiving Department is located in the metal quonset hut directly east of the Harvey Fletcher Laboratories Building. All deliveries are made here, and materials which have been received are inspected before being delivered to the various ordering departments.

Common items used by janitorial and maintenance departments are available for purchase on campus purchase orders. Quantity buying effects a savings to the University, and materials are available on the campus when needed.

Students Supply Association

The Students Supply Association operates in the Herald R. Clark Student Service Center to make it convenient for students to purchase their books, school supplies, gifts, and a few accessories.

The store is a department of the University, and its policies are established by a board of directors appointed by the President of the University. Any profit made by the store goes to the University to be used as the President and Board of Trustees authorize. None of it goes to any individual.

Every effort is made to operate the store in an efficient and up-to-date manner so that it will be an example of good retailing practice. The board of directors has charged the manager with the responsibility of operating the store just as he would if it had stiff competition right on campus. At the same time, the store must not alienate the merchants down town by being a "price cutter." Merchandise is sold at regular list prices.

University Press

The University has a large investment in printing equipment and presses which are used for the myriad printing jobs required on campus. The press is responsible for the printing of the student daily newspaper, the literary magazine, the yearbook, and numerous University brochures, bulletins, and catalogs.

Colleges, Schools, Divisions

Colleges

Each college in Brigham Young University is an undergraduate college which offers work for the bachelor's degree only. All work beyond the bachelor's degree, in every department, is under the dean of the Graduate School.

Biological and Agricultural Sciences
Commerce
Education
Family Living
Fine Arts
General
Humanities and Social Sciences
Physical and Engineering Sciences
Recreation, Physical and Health Education,
and Athletics

Schools

Graduate
Nursing

Division

Religion

College of Biological and Agricultural Sciences

Raymond B. Farnsworth, Acting Dean (110 B)

The following departments are in the College of Biological and Agricultural Sciences:

Agricultural Economics
Agronomy
Animal Husbandry
Bacteriology
Botany
Horticulture and Horticultural Specialties
Industrial Arts and Drawing
Zoology and Entomology

Biological Division. Included in the biological division of this college are the Departments of Bacteriology, Botany, Zoology and Entomology.

The biological division of the college enables the student to study and to understand more fully the plant and animal world. Preparation for teaching and research is emphasized.

Students who are interested in medical technology, medicine, dentistry, and veterinary science can receive their pre-training in the biological division of this college. Students desiring to register in these fields should make use of the guides offered.

Agricultural Division. Included in the agricultural division of this college are the Departments of Agricultural Economics, Agronomy, Animal Husbandry, Horticulture and Horticultural Specialties, and Industrial Arts and Drawing.

The agricultural division provides instruction in the principles and technical operations pertaining to the farm, the shop, the trades, and industries. The students are prepared not only to satisfy the practical needs of the community, but they are also trained to become specialists in the fields of agricultural science, for laboratories and also for teaching on all educational levels. Capable leadership and efficient service in the phase of work they choose are emphasized.

MEDICAL TECHNOLOGY

(Clinical Laboratory; Radiology)

Adviser: David M. Donaldsen

Through a cooperative agreement with various hospitals, the Brigham Young University has made provision for training medical technologists. The curricula are designed to prepare students for careers in either the clinical laboratory or the radiological laboratory. The course indicated in the following outline consists of a three-year period of residence study at the Brigham Young University campus and one year of practical hospital internship.

During the fourth year (internship), the student will register and pay tuition. After satisfactory completion of the internship, the student is eligible to receive a Bachelor of Science Degree.

Recommended Curriculum for Majors

Freshman Year	A	W	S	Sophomore Year	A	W	S
Chemistry 101, 102, 284	5	5	5	Bacteriology 301, 501, 502 ..	5	5	5
Mathematics 101, 111, 112	5	5	5	Zoology 105, 164		5	5
English 111, 112, 113	3	3	3	Religion	2	2	2
Physical education	1	1	1	History 170	5		
Religion	2	2	2	Literature (electives)		4	
Health 130			2	Social sciences (electives)	5		5
	—	—	—		—	—	—
Total Hours	16	16	18	Total Hours	17	16	17

Junior Year	A	W	S	Electives	6
Bacteriology 511	5			Physics 111, 112	5 5
Chemistry 103, 220		5	5	Humanities (elective)	3
Zoology 371	2				
Zoology 417		4		Total Hours	16 18 17
Religion (Humanities)	3	3			
Bacteriology 491	1	1	1	Senior Year	A W S
Literature (electives)		2		Hospital laboratory	
				internship	15 15 15

PRE-DENTAL COURSE

Advisory Committee: A. Lester Allen (chairman).

It is strongly recommended that the student select course work that will lead to a bachelor's degree in zoology, bacteriology, chemistry, sociology, or psychology. This will give him the broad background desired by the dental schools and will also prepare him to enter an alternative field in the event he is not admitted to dental school.

Ninety quarter hours of work, including the following courses, will satisfy the minimum requirements of most dental schools. The student is advised to consult dental school catalogs to make sure that specific requirements of the schools of his choice are met. Such requirements may be somewhat more or less than those suggested below.

English 111, 112, 113

Mathematics 101, 111, 112

Physics 111, 112, 113

Zoology 105, 212, 263

Chemistry 111, 112, 113, 221, 351, 352, 353

The remaining units should be completed in general education and course work leading to the bachelor's degree.

PRE-MEDICAL COURSE

Advisory Committee: A. Lester Allen (chairman).

It is strongly recommended that the student select course work that will lead to the bachelor's degree in zoology, bacteriology, chemistry, sociology, or psychology. This will give him the broad background desired by the medical schools and will also prepare him to enter an alternative field in the event he is not admitted to medical school.

Three years of work, including the following courses, will satisfy the minimum requirements of most medical schools, although preference is usually given to college graduates. The student is advised to consult medical school catalogs to make sure that specific requirements of the schools of his choice are met. Such requirements may be somewhat more or less than those suggested below.

English 111, 112, 113

French or German 101, 102, 103 (reading knowledge)

Mathematics 101, 111, 112

Zoology 105, 212, 263, 373

Chemistry 111, 112, 113, 221, 351, 352, 353

Physics 111, 112, 113

The remaining units should be completed in general education and course work leading to the bachelor's degree.

PRE-OPTOMETRY COURSE

Chairman: A. Lester Allen

The requirements for admission to schools and colleges of optometry are not identical. Typically, the requirements include courses in English, mathematics, physics, chemistry, and biology or zoology. Some schools have varied requirements in psychology, social sciences, literature, philosophy, and foreign language.

The pre-optometry requirements represent a minimum of two academic years of study, all of which may be taken on this campus.

PRE-OSTEOPATHY COURSE

Chairman: A. Lester Allen

Students intending to apply for admission to osteopathic school should follow the outline given under pre-medicine.

PRE-PHARMACY COURSE

Chairman: A. Lester Allen

The first year of the curriculum of the pharmacy school may be completed at this campus. For specific details the student should consult the chairman of the pre-pharmacy committee.

PRE-VETERINARY COURSE

Adviser: Keith H. Hoopes

Certain basic entrance requirements are common to all of the veterinary schools in the United States. The courses listed below are designed as a guide to help the student fill these basic entrance requirements. In connection with his pre-veterinary curriculum the student is strongly urged to work toward a bachelor's degree, including course work in animal husbandry and the basic sciences. A bachelor's degree broadens one's ability to understand the principles of veterinary medicine, increases his chances of acceptance into a veterinary school, and provides an alternative should he fail to enter veterinary school.

The student is advised to consult the catalogs of veterinary schools of his choice for specific entrance requirements that may affect him. Attention is also called to the general college requirements for graduation, such as physical education, social science, and humanities. Students in the colleges of veterinary medicine are not exempt from general college requirements for graduation.

English 111, 112, 113

Chemistry 111, 112, 113, 221, 351, 352

Mathematics 111, 112

Botany 101

Zoology 105, 263

Physics 111, 112

Animal Husbandry 207, 215

College of Commerce

Weldon J. Taylor, Dean (162 N)

The following departments are in the College of Commerce:

Accounting
Business Education and Office Management
Business Management
Economics

The purpose of the College of Commerce is to provide training which will enable students to make an effective contribution to the stability and abundance of our economy and thereby to acquire economic self-reliance and personal satisfaction. Because of the constant and progressive changes that are taking place in our society and because of the dynamic characteristics of business organization and operation, success in business requires both technical competence and a high degree of adaptability. For this reason the training provided in all departments of the college gives emphasis to the social, human, and technical aspects of the business and economic environment. In order to provide an understanding of the functions of business, the institutional framework for their accomplishment, the language and technical skills utilized and above all the inter-relatedness of the several activities of business endeavor, all departments require course work in the following subject areas: marketing, production, finance, accounting, statistics, law, and economic theory.

The program is directed toward the achievement of the following specific objectives:

(1) Developing an understanding and appreciation of the **human characteristics and social aspects** of business as they are related to the individual, the firm, and the community.

(2) Training in the use and understanding of the tools and information used in measuring, analyzing, and controlling business operations and economic change.

(3) Developing in the student a capacity to determine what information is relevant to the accurate solution of a business problem and to analyze, organize, and present the solution of the problem in an effective manner.

(4) Helping the student to acquire the capacity to communicate ideas orally and in writing.

In order that all students who plan to graduate with a major in any of the departments in the College of Commerce (except business education majors) may benefit from a common background of basic information and tools to facilitate their advanced work, they are required to take the core courses listed below. These courses form a basic training normally to be completed during the first three years of college work and before the student undertakes specialization in his major area.

Accounting 101 and 102, or 201 and 202, and 230 15 hours

Economics 101 and 102 or 111, 331 and 345 15 or 18 hours

Business Management 340, 342, 347 and 348 20 hours

Substitutions may be made in B.E.O.M. for Business Management 340 and Economics 345. Majors in economics may substitute Economics 453 for Business Management 348.

The courses in economics and psychology listed above apply toward the University general education requirement in social science.

The degrees of Bachelor of Arts and Bachelor of Science are given to graduates of this college.

PRE-GRADUATE BUSINESS PROGRAM

All students planning to secure a degree at a graduate school of business may register for a pre-graduate business program administered by the College of Commerce. Early contact (preferably in the freshman or sophomore year) should be made with the dean, who will advise students concerning their work.

College of Education

Asahel D. Woodruff, Dean (118 McKay)

Antone K. Romney, Assistant Dean (118 McKay)

The following departments are in the College of Education:

Educational Administration
Educational Philosophy and Programs
Educational Research and Services
Instruction

The College of Education has as its principal function the educating of teachers, counselors, school librarians, principals, supervisors, superintendents, and other professional workers in education.

High School Teaching. A student who plans to prepare for a career in high school teaching and related activities may do so either by registering within the College of Education or by registering in one of the other colleges of the University. In the latter case, he must complete the required professional education courses and the necessary subject-matter and other courses for the teaching certificate under the joint direction of an adviser in the College of Education and an adviser in his major college.

Elementary School Teaching. A student who is interested in elementary school teaching and who desires to register for major study outside of the College of Education should inquire of the certification clerk, College of Education, Room 111, McKay Building, concerning the possibilities. This is currently possible for majors in human development and family relationships, and in speech correction.

Teaching as a Second Career. A student who is preparing for a career in a field other than teaching may provide himself with a second possibility for employment by meeting the requirements for certification as a teacher while he is completing the other preparation. By planning early in one's career, one may do this within the usual scope of the baccalaureate program and with little or no interference with the major program. It should be noted that at present this is particularly feasible for high school teaching, where depth of preparation in two or three subject-matter fields is desired, but also may be possible under special arrangements in the elementary school program.

Early Decisions Desirable. In either case, the student is urged to make the decision as early as possible in his college career to avoid conflicts in the scheduling of courses and to take fullest advantage of the maturing effect produced by spacing the study of teaching over a period of several quarters rather than concentrating it in two or three quarters.

How to Proceed. Those who decide to register in the College of Education should transfer to that college at once. All others will register in the colleges in which they are majoring. Every candidate for a teacher's certificate, however, regardless of the college in which he is registered, must have his certification program approved in the Certification Office, 111 McKay, before he enters the first course in the professional education sequence. Students normally enter this course in one of three cycles and are expected to remain in the cycle entered until graduation. Cycle I begins Spring Quarter, sophomore year; Cycle II, Autumn Quarter, junior year; and Cycle III, Winter Quarter, junior year. Students entering B.Y.U. during the Summer Quarter may be started during the summer and will then continue in Cycle I. Because it is necessary to keep the three cycles balanced, students will not be admitted to the first course without proper approval of their programs.

Students who have records in the Academic and Disciplinary Standards Office may be asked to withdraw from the Teacher Certification program for cause.

All students in the Teacher Certification program will be required to meet minimum standards in speech and hearing. Speech and hearing tests will be given

as part of the course requirements in E.R.S. 305, the first course in the certification sequence.

Each student who undertakes preparation for teaching will be provided with a brochure which describes the requirements and procedures and in which he will be expected to keep a record of his program and his progress.

How to Become Certified. A student who completes the certification requirements set forth in the College of Education, regardless of the college in which he is majoring, is eligible for a certificate issued by the Utah State Board of Education. Certification is received from that board, after application for certification has been made through the dean of the College of Education, who in

turn recommends the student to the state board. All students who have met the requirements of the state and the University are recommended. Applications will be furnished routinely to all who are successfully completing the requirements near the end of the program.

A student may prepare himself to be certified as any of the following:

- Teacher in elementary schools
- Teacher in kindergarten
- Teacher in secondary schools
- Teacher of special classes for handicapped children
- Teacher of vocational homemaking in secondary schools
- Teacher of industrial arts in secondary schools
- Librarian in elementary schools
- Librarian in secondary schools
- Counselor
- Administrator-Supervisor in elementary schools
- Administrator-Supervisor in secondary schools
- Superintendent
- Teacher of unit shops in industrial arts
- Teacher of trade and industrial education day trade courses
- Supervisor of trade and industrial education
- Local director of trade and industrial education
- Teacher and teacher-coordinator of distributive education
- Local supervisor of distributive education

Certification Requirements. Certification of teachers is a function of the Utah State Board of Education. The Board of Education publishes requirements for certification in booklet form and in supplements. The present policy of the board is one of stating minimum requirements in general terms. This is done for the purpose of encouraging the institutions that prepare teachers to engage in continuous study of the requirements, going beyond the minima in whatever ways seem desirable. While the board is always able to certify a candidate without recommendation from a university, it chooses to require the recommendation of the officer in charge of teacher preparation in each institution. This requirement is of assistance not only to the state board, but also the institution because of the assurance that its efforts to improve the program of preparation will not be vitiated by the ready availability of ways of going around its minimum requirements.

Alterations in the requirements may be made from time to time. They will not be made retroactive in the case of any student, but may be made to apply to uncompleted portions of his program, where this can be done without difficulty.

Selection of Candidates. Candidates for certification as teachers should expect to be carefully selected, even though their interest in certification is secondary to another career at the time. Only those who are individuals of high capacity, who have acquired a substantial general education, whose mastery of their major and minor fields is unquestioned, and whose personal characteristics reflect the best ideals of our culture will finally be recommended for certification.

The selection of those who will finally be recommended for certification is a continuous process. It begins when the student first announces his intention of seeking certification. It continues through all stages of his preparation. Among other things, it is necessary to maintain a grade point average of 2.25 to remain in the program.

Students Transferring from Other Colleges. To transfer from another college to the College of Education or to be admitted to the College of Education from another institution, the student must have an academic grade point average of 2.25 or better. To continue to take sequence courses in professional education, a student must have a cumulative grade point average of 2.25, or his last quarter grade point average must reach that level. If a student cannot qualify on either basis, he will be asked to withdraw from the certification program until his last quarter grades qualify him for re-entry. To qualify, he must carry successfully at least 12 hours of course work in one quarter with the prescribed grade point average.

Special Education. Utah has recently adopted a certification program in special education, with specialization provided in the following areas: children with intellectual handicaps, children with motor handicaps, children with speech and hearing handicaps, and children with academic handicaps. To be certified in Utah the individual must have a valid teaching certificate, plus appropriate experience, and must complete specified graduate study in the chosen area. Students interested in speech and hearing correction should contact the Speech Department. All others should consult the Department of Educational Research and Services.

Personnel and Guidance. Certification as a school counselor in Utah requires approximately one year of graduate work in personnel and guidance plus two years of successful teaching experience. For course listings in this area, see the Department of Educational Research and Services.

PREPARATION OF ELEMENTARY SCHOOL TEACHERS

The program outlined below will satisfy requirements for an elementary teaching certificate as well as graduation requirements for students registered in the College of Education. The phases involved in completion of these requirements should be coordinated so that the entire program functions smoothly.

1. **General Education Requirements.** The candidate for certification must meet University requirements for graduation. See "Requirements for Graduation" section in this catalog.
2. **Academic and Professional Preparation.** The candidate for certification must complete the following program in academic and professional courses.
 - a. **Required Courses.** He must complete 53 hours of designated elementary and professional education courses, which are listed below in recommended sequence. There are three cycles offered, in each of which the sequence is the same. Cycle I begins Spring Quarter, sophomore year; Cycle II, Autumn Quarter, junior year; and Cycle III, Winter Quarter, junior year. Each student is expected to choose a cycle with the help of his adviser and to remain in that cycle until graduation.

First Quarter of Each Cycle

	Hours
E.R.S. 305. Development and Learning (directed observation TBA)	6
Art 226. Art for Elementary School Teachers (an elective course is also required)	3

Second Quarter

Instruction 345. Basic Classroom Procedures and Participation (participation TBA)	4
Music 237. Music for Elementary School Teachers (prerequisite Music 102)	3

Phys. Ed. 375 or Phys. Ed. 376. Physical Education for Primary or Intermediate Grade Teachers	2
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Third Quarter

*Health 361. Health Education for Teachers	3
Instruction 447. Curriculum and Methods of Elementary School Language Arts and Arithmetic (directed observation TBA)	4
Instruction 340. Children's Literature	3

Fourth Quarter

Instruction 346. Curriculum and Methods in Elementary School Social Studies and Science (directed observation TBA)	4
Instruction 448. Student Teaching (public schools, one half day)	6
*Administration 310. The State, The School and the Teacher	3

Fifth Quarter

**Instruction 449. Student Teaching (public schools, full day for 5 weeks)	6
**Instruction 450. Principles of Curriculum and Teaching	3
**Ed. Phil. 415. Educational Values.	3
*Health 361 and Ed. Adm. 310 may be taken any time in the sequence with the permission of the adviser.	
***These courses will be given on the Block Plan; i.e., Instruction 449 is to be taken during the first or second five weeks of the quarter, with Instruction 450 and Ed. Phil. 415 to be taken the alternate five weeks of the same quarter. (Students should plan to take Music 301 or Recreation 388 to satisfy religion requirements.)	

- b. **Elective Required.** The candidate for certification must have, in addition to the courses listed above, one additional elective course (at least 2 hours) in art. Especially recommended are Instruction 324 and 325.
- c. **Minor.** Elementary instruction majors are required to have a minor of 20 hours in an approved subject, plus 10 hours in a subject related to the minor. The following minors and related fields are approved:

Minor	Related Fields
Art	Music, Speech
English*	Journalism, Speech, Foreign Language, Library Science
Foreign Language	Journalism, English*, Speech
Geography	Geology, History, Political Science
Geology	History, Political Science, Geography
H.D.F.R.	Sociology, Psychology
Library Science	Journalism, English*, Speech
Music	Art, Speech
Physical Education	Youth Leadership, Health**, Recreation
Psychology	Sociology, H.D.F.R.
Recreation	Youth Leadership, Health**, Physical Education
Sociology	Psychology, H.D.F.R.
Specific Education (Exceptional Child)	Psychology, Speech
Speech Education	Music, Art, Psychology, Special Education
Youth Leadership	Recreation, Physical Education, Health**

Certain subjects may be used in a split-minor combination, totaling 30 hours. The following combinations are approved:

Geology-Geography	Physics-Geology (or Geography)
History-Geography	Political Science-History (or Geography)
H.D.F.R.-Sociology (or Psychology)	Youth Leadership-Recreation (or Health**)
Music-Art	Sociology-Psychology
	Speech Education-Special Education

*English 111, 112, 113 may not be included in total hours required.

**Health 130 may not be included in total hours required.

3. **Additional Courses Recommended.** The following courses are recommended as electives to more fully prepare the candidate in elementary instruction.

	Hours
Instruction 422. Early Childhood Education (required for kindergarten certification in California)	3
Instruction 433. Construction and Use of Teaching Materials	2
Instruction 324. Arts and Crafts for Elementary Teachers	2
Instruction 325. Arts and Crafts for Early Childhood	2
Instruction 338. Manuscript Writing for Elementary Teachers (especially recommended for primary grade teachers)	3
Music 301. Sacred Music (should be taken same quarter as Instruction 449 to satisfy religion requirements)	2
Instruction 305. Audio-Visual Education (required for California certification)	3
E.R.S. 550. Guidance Services in Public Schools.	3
Geology 501. Introduction to Study of Minerals and Rocks	3
Geology 502. Geology for Teachers	3
H.D.F.R. 210, 211. Child Development and Observation	3, 1
H.D.F.R. 572. Professional Person and Families	3
Music 170. Vocal Workshop	1
Music 102. Fundamentals of Music.	3
Music 105. Group Piano	2
Psychology 320. Psychology of Childhood	3
Psychology 321. Psychology of Adolescence	3
Psychology 445. Psychology of Exceptional Child (especially recommended for special education teachers)	3
Speech 366. Speech in the Elementary School	3

Note: Any deviation in the sequence or outlined program must be approved in writing and filed in the Certification Office, 111 McKay.

PREPARATION OF SECONDARY SCHOOL TEACHERS

The College of Education offers professional courses leading to secondary certification. Students desiring certification in this area must complete course requirements in the following areas:

1. **General Education.** Examine the section, "Requirements for Graduation," for an explanation of these requirements.
2. **An approved teaching major and minor, or composite major.** See below.
3. **Professional Education.** The following required courses complete the requirement for a minimum of 33 hours of professional education. For course prerequisites and sequence check course descriptions.

	Hours
Health 362. Health Education for Teachers.	3
E.R.S. 305. Development and Learning.	6
Instruction 377. Basic Classroom Procedures.	4
Instruction 478. Unit Planning and Teaching.	4
Instruction 479. Secondary Student Training.	7
Administration 310. The State, the School, and the Teacher.	3
Ed. Phil. 415. Educational Values.	3
Instruction 450. Principles of Curriculum and Teaching.	3

SUBJECT-MATTER PREPARATION OF SECONDARY SCHOOL TEACHERS

The University offers two approaches to certification. One consists of the traditional teaching major and teaching minor; the other consists of a composite teaching major.

Teaching Major and Teaching Minor. A teaching major consists of 36 or more hours of designated courses in a subject taught in Utah high schools and approved by the College of Education. A teaching minor consists of 24 or more hours of designated courses in a subject also taught in the secondary schools of Utah and approved by the College of Education. The 36-52 hour groups listed in the following material (both Section A and Section B) are approved for the teaching major; the 24-33 hour groups listed in the same sections are approved for the teaching minor.

Composite Teaching Major. A composite teaching major consists of work in three subjects in the same general field totaling at least 60 hours, with 24 or more hours of designated courses in a dominant subject, and 18 or more hours of designated courses in each of two related subjects in the same general area. For guidance in selecting and completing a composite teaching major, students must consult with the Certification Office, 111 McKay, whose responsibility it is, under cooperative advisement with the academic departments, to administer composite majors. Only those subjects listed in Section B, which follows, may be selected for a composite teaching major.

Any deviation from the academic programs as outlined in Sections A and B must be approved, in writing, by the chairman of the subject-matter department concerned and filed with the student's permanent records in the College of Education.

A. TEACHING MAJORS AND TEACHING MINORS. The following may not be used as composite teaching majors (See preceding explanation).

(Note: Old course numbers appear in parentheses following new course numbers.)

ART:

45-hour list (Major): 12 hours from 111 (11), 121 (21), 122 (22) or equivalents; art history, 9 hours; crafts, 8 hours; advanced design, 2 hours; commercial art, 4 hours; graphics, 2 hours; interior design, 2 hours; painting, 4 hours; sculpture, 2 hours.

27-hour list (Minor): Drawing (lower division), 4 hours; design (lower division), 4 hours; art history, 3 hours; crafts, 4 hours; commercial art, 2 hours; painting, 4 hours; sculpture, 2 hours; interior design, 2 hours; graphics, 2 hours.

BOTANY:

39-40 hour list (Major): 101 (1), 123 (3), 145 (18), 230 (10); 351 (121) or 355 (112); 390 (180) or 391 (181); 410 (140), 430 (150); 445 (155); 490 (183) or 491 (184); 531 (101) or 535 (102); 543 (103).
Recommended: Bacteriology 121 (21), Botany 451 (166).

24-hour list (Minor): 101 (1), 112 (2), 123 (3); and 10 hours selected from 145 (18), 230 (10), 410 (140), 430 (150), 451 (166).

DRAWING:

25-hour list (Minor): 102 (4), 109 (9), 113 (43), 204 (new), 244 (44), 245 (45), 248 (47-48), 341 (140), 380 (new).

INDUSTRIAL ARTS:

52-hour list (Major): Drawing*—8 hours, Drawing 102 (4), 109 (9), 113 (43).
Woodwork—12 hours, Industrial Arts 101 (27), 103 (30), 104 (31); and 3 hours selected from 105 (32), 302 (125), 303 (126), 304 (124).
Metalwork—12 hours, Industrial Arts 120 (11), 125 (12), 130 (10), 140 (19), 150 (16).

Craftwork—8 hours, Industrial Arts 260 (60), 464 (64 or 164), 466 (100), Art 263 (Ind. Arts 63).

Electricity—6 hours, Industrial Arts 360 (145), 365 (146).

Shop Maintenance—3 hours, Industrial Arts 301 (123).

Electives*—3 hours.

*If drawing is selected as the teaching minor, the elective hours should be increased to 11 and drawing omitted from the major requirements.

(Note. In order to complete requirements for industrial arts certification, the student must complete the following professional education courses (39 hours total): Ed. R. and S. 305 (101), 550 (145); Ind. Arts 370 (160), 377 (120), 478 (138), 479 (139); Ed. Inst. 450 (185); Ed. Phil. 415 (100); Ed. Adm. 310 (100); and Health 362 (158).

24-hour list (Minor): 101 (27), 103 (30), 140 (19), 260 (60) (total 11 hours); 4 hours of electives in drawing; 4 hours of electives in electricity; and 5 additional hours of electives chosen in consultation with the chairman of the Industrial Arts Department.

LANGUAGES:

36-hour list (Major): 321 (121), 322 (122), 323 (123), 441 (111), 442 (112), 443 (113); and 18 hours of electives, of which at least 12 hours must be selected from 201 (101), 202 (102), 203 (103), 431 (131), 432 (132), 433 (133), or equivalent upper division courses.

24-hour list (Minor): 321 (121), 322 (122), 323 (123); and 15 hours of electives, of which at least 11 hours must be in upper division courses.

(Note: The above requirements for a teaching major or minor in languages apply only to French, German, Spanish. Requirements for a teaching major or minor in Latin must be specially set up by the chairman of the Language Department.)

MUSIC EDUCATION:

The following lists may be used for teaching minors only. See B below for lists of composite majors.

Instrumental Music Emphasis Area:

28-hour list: 101 (MG 1) or 484 (MU 184); 190 (MT 21), 301 (MG 157), 302 (MG 161); 10 hours selected from 160p (MA 79-, 80-, 81-p), 368 (ME 110), 369 (ME 115), 370 (ME 111), 372 (ME 112), 373 (ME 117), 375 (new), 376 (new); 6 hours of instrumental ensembles.

Vocal Music Emphasis Area:

29-hour list: 101 (MG 1) or 484 (MU 184); 190 (MT 21), 301 (MG 157), 302 (MG 161); 160p (MA 79-, 80-, 81-p), 366 (ME 106), 374 (new), 568 (ME 128); 4 hours of vocal ensembles.

(Note: The above teaching minors are to be selected only when the accompanying teaching major is in an area other than Music.)

ZOOLOGY:

38-hour list (Major): 105 (11), 176 (18), 212 (12), 230 (Ent. 30); 263 (13) or 164 (45); 332 (Ent. 132); 343 (159) or 345 (160); 346 (158) or 347 (157), 385 (175), 496 (182), 497 (183).

Recommended: Bacteriology 121 (21).

24-hour list (Minor): 105 (11), 164 (45), 176 (18), 230 (Ent. 30), 385 (175), 496 (182), 497 (183); 2 hours of electives.

B. COMPOSITE TEACHING MAJORS. The following general fields may be used to complete composite teaching majors as well as teaching majors and teaching minors (See preceding explanation):

ACCOUNTING AND OFFICE MANAGEMENT**Accounting:**

38-hour list (Major): 101 (1) or 201 (new), 102 (2) or 202 (new); 285 (85), 350 (150), 351 (151), 352 (152); 8 hours chosen in consultation with the chairman of the Accounting Department from Accounting 230 (35), 316 (125); Business Management 243 (F. & B. 154), 348 (F. & B. 151); B.E.O.M. 106 (Acctg 26); Economics 453 (F. & B. 153).

24-hour list: (Minor or Dominant Subj.): 101 (1) or 201 (new), 102 (2) or 202 (new); 14 hours chosen in consultation with the chairman of the Accounting Department from 230 (35), 285 (85), 316 (125), 350 (150), 351 (151), 352 (152); B.E.O.M. 106 (Acctg. 26).

18-hour list (Related Subj.): 101 (1) or 201 (new), 102 (2) or 202 (new); 8 hours chosen in consultation with the chairman of the Accounting Department from 230 (35), 285 (85), 316 (125), 350 (150); B.E.O.M. 106 (Acctg 26).

Economics:

36-hour list (Major): 101 (1) and 102 (new), or 201 (new); 274 (74); 345 (145); 461 (161); 575 (167); and 10 to 13 hours of electives.

24-hour list (Minor or Dominant Subj.): 101 (1) and 102 (new), or 201 (new); 274 (74); 345 (145); and 6 to 9 hours of electives.

18-hour list (Related Subj.): 101 (1) and 102 (new), or 201 (new); 274 (74); 345 (145); and 0 to 3 hours of electives.

General Business: (May not be used as part of a composite teaching major.)

24-hour list (Minor): Accounting 101 (1) or 201 (new), 102 (2) or 202 (new); Economics 101 (1) and 102 (new) or 201 (new); and 9 hours selected from Accounting 316 (125), Economics 274 (74), 345 (145), 461 (161). Above 20 hours, a student may select from Bus. Mgt. 205 (M. 151), 374 (M. 107).

(Note: If a student selects this list as a teaching minor, the above courses in accounting, economics, or business management may not be used in completion of his teaching major.)

Business Education with Shorthand:

36-hour list (Major): Typewriting (2-4 hours)—B.E.O.M. 101* (21), 102** (22), 103 (23) or equivalent; 104 (24) required.

Shorthand (8-16 hours)—B.E.O.M. 111* (11), 112** (12), 113 (13), 214 (14) or equivalents; 311 (151) required.

General (13 hours)—B.E.O.M. 106 (26), 220 (31), 470 (154), 475 (155),

Electives—3-13 hours as needed to complete minimum 36 hours must be selected in consultation with the chairman of the Office Management Department from B.E.O.M. 305 (new), 320 (110), 325 (new), 480 (160), 485 (new), 486 (new), Bus. Mgt. 480 (new), 481 (new).

*Not allowed if student has earned one year of credit in this subject in high school.

**Not allowed if student has earned two years of credit in this subject in high school.

(Note: In order to qualify for a teaching major in this area, the student must also have completed Accounting 101 (1), 102 (2), and Economics 101 (1).

24-hour list (Minor, Dominant or Related Subj.): Typewriting—4 hours including O.M. 104 (24). Shorthand—12 hours including O.M. 311 (151). General (8 hours)—O.M. 106 (26), 220 (31), 470 (154).

Office Management without Shorthand:

36-37 hour list (Major): O.M. 103 (23), 104 (24), 106 (26), 220 (31), 305 (new), 320 (110), 325 (new), 470 (154); Accounting 101 (1) or 201 (new), 102 (2) or 202 (new), 316 (125). Additional courses to complete minimum 36 hours must be selected in consultation with the chairman of the Office Management Department from O.M. 480 (160), 485 (new), 486 (new), and Accounting 555; Bus Mgt. 480 (new), 481 (new).

(Note: In order to qualify for a teaching major in this area, the student must have completed Economics 101. The 24-hour group listed above under "Business Education with Shorthand" cannot be used as a minor with this list.

AGRICULTURE:**Agronomy:**

37-hour list (Major): 141 (41), 251 (51), 260 (60), 262 (62), 305 (105); and 18 hours chosen in consultation with the chairman of the Agronomy Department from 301 (101), 302 (102), 307 (107), 314 (114), 451 (151), 455 (155), 459 (159), 573 (173).

24-hour list (Minor or Dominant Subj.): 141 (41), 251 (51), 262 (62); and 12 hours chosen in consultation with the chairman of the Agronomy Department from 260 (60), 302 (102), 305 (105), 307 (107), 314 (114), 451 (151), 455 (155).

18-hour list (Related Subj.): 141 (41), 251 (51); and 10 hours chosen in consultation with the chairman of the Agronomy Department from 260 (60), 262 (62), 302 (102), 305 (105), 451 (151).

Animal Husbandry:

39-41 hour list (Major): 207 (7), 208 (32), 215 (15); and 20-22 hours selected from 161 (21), 170 (90), 311 (111), 312 (112), 335 (154), 340 (155), 345 (156), 370 (190), 477 (194).

25-29 hour list (Minor or Dominant Subj.): 207 (7), 208 (32), 215 (15); and two courses selected from 161 (21), 170 (90), 311 (111), 312 (112), 335 (154), 340 (155), 345 (156), 370 (190).

19-hour list (Related Subj.): 207 (7), 208 (32), 215 (15).

(Note: Certain courses may be substituted in the above lists with the approval of the department chairman.)

Horticulture:

18-hour list (Related Subj.): 101 (1), 103 (3), 107 (7), 402 (102); Agronomy 459 (Horticulture 159); and 4 hours electives in horticulture.

HOMEMAKING EDUCATION:

(Note: Homemaking education may be used only as a composite teaching major; no teaching major or teaching minor may be selected from this field.)

64-65 hour list: Clothing and Textiles 110 (10), 115 (15), 225 (25), 260 (60) or 370 (170), 335 (135), 475 (175); Food and Nutrition 110 (10), 255 (105), 256 (106), 264 (120), 340 (140).

Economics and Management of Home 325 (125), 330 (130), 470 (170); Housing and Design 360 (160), 375 (175).

Human Development and Family Relationships 210 (40), 211 (41), 322 (101), 361 (161); Nursing 288 (7).

At least 6 hours selected from Clothing and Textiles 355 (145); Food and Nutrition 330 (150), 345 (145), 560 (160); Housing and Design 120 (20), 335 (145); Human Development and Family Relationships 160 (85), 360 (160); Economics and Management of Home 265 (65).

(Note: In order to complete requirements for homemaking certification, the student must complete the following professional education courses (33 hours): Ed. R. and S. 304 (100); Homemaking Ed. 377 (120), 475 (123), 478 (138), 479 (139); Ed. Inst. 450 (185); Ed. Adm. 310 (100); Ed. Phil. 415 (100); Health 362 (158).

LANGUAGE ARTS:

English:

48-52 hour list (Major): 221 (21), 251 (51), 382 (182), 490 (195), 561 (161) or 563 (163), 562 (162); at least 5 hours from 241 (41), 242 (42), 243 (43), 345 (191), 356 (156), 357 (157), 358 (158), 552 (152), 553 (153), 554 (154); four courses from 571 (171), 572 (172), 573 (173), 574 (174), 575 (175). Two of the following substitutions are allowed: 332 (132) for 575 (175), 541 (141) for 572 (172), 542 (142) for 573 (173), 552 (152) for 572 (172), 553 (153) for 573 (173), 554 (154) for 574 (174), 581 (181) for 571 (171).

25-hour list (Minor, Dominant or Related Subj.): 221 (21), 251 (51); 282 (82) and one elective (chosen in consultation with the chairman of the English Department) or 382 (182); 562 (162); one course from 572 (172), 573 (173), 574 (174), 575 (175) (574 or 575 recommended).

Journalism:

36-hour list (Major): 211 (61), 212 (62), 305 (105), 321 (185), 322 (185), 490 (106); 14 hours from 101 (1), 311 (161, 162), 312 (179), 313 (189), 315 (121), 330 (130), 331 (131); and Physics 177 (26).

24-hour list (Minor, Dominant or Related Subj.): 211 (61), 212 (62), 321 (185), 322 (185), 490 (106); 7 hours from 311 (161, 162), 312 (179), 313 (189), 326 (175), 330 (130).

Speech:

44-hour list (Major): 101 (1), 111 (11), 121 (24), 122 (22), 126 (26), 241 (41), 391 (162), 401 (100), 460 (160), 471 (180); 6 hours from 319 (161a), 320 (161b), 321 (161c); and 8 hours chosen in consultation with the chairman of the Speech Department.

24-hour list (Minor, Dominant or Related Subj.): 24 hours selected in consultation with the chairman of the Speech Department from 101 (1), 111 (11), 121 (24), 122 (22), 123 (23), 126 (26), 241 (41), 319 (161a), 320 (161b), 321 (161c), 391 (162), 460 (160), 471 (180).

MATHEMATICS AND PHYSICAL SCIENCES:

Chemistry:

43-50 hour list (Major): 111 (14), 112 (15), 113 (16), 214 (111), 221 (31), 351 (151), 352 (152), 353 (153); [461 (161) and 462 (162)] or [581 (181) and 582 (182)] or [591 (191), 592 (192) and 593 (193)].

24-hour list (Minor or Dominant Subj.): 111 (14), 112 (15), 113 (16), 221 (31), 351 (151).

20-hour list (Related Subj.): 111 (14), 112 (15), 113 (16), 221 (31).

(Note: In any of the foregoing chemistry lists, Chemistry 105 (7) and 106 (8), with a grade of B or better, will be considered equivalent to Chemistry 111 (14) and 112 (15).

Geology:

36-hour list (Major): 102 (2), 111 (11), 112 (12), 113 (13), 251 (117), 252 (118), 253 (119), 311 (128), 480 (171), 502 (new).

27-hour list (Minor or Dominant Subj.): 102 (2), 111 (11), 112 (12), 113 (13), 251 (117), 252 (118), 253 (119), 502 (new).

18-19 hour list (Related Subj.): 102 (2), 111 (11), 112 (12); 113 (13), 501 (112); or 101 (1), 102 (2), 112 (12), 501 (112), 502 (new), 503 (210).

Mathematics:

39-hour list (Major): 111 (11), 112 (12), 231 (13), 232 (91), 233 (92), 234 (93); and 9 hours selected in consultation with the chairman of the Mathematics Department.

25-hour list (Minor or Dominant Subj.): 111 (11), 112 (12), 231 (13), 232 (91), 233 (92).

20-hour list (Related Subj.): 111 (11), 112 (12), 231 (13), 232 (91).

Physics:

36-hour list (Major): 211 (41), 212 (42), 213 (43), 321 (121), 322 (122); and 13 hours electives from upper division courses.

27-hour list (Minor or Dominant Subj.): 211 (41), 212 (42), 213 (43), 321 (121), 322 (122), 323 (123).

19-hour list (Related Subj.): 137 (21) or 177 (26); 211 (41), 212 (42), 213 (43). Physics 127 (new) or 128 (new) may be substituted for 137 or 177.

MUSIC EDUCATION:

(Note: The three areas listed below may be used as composite teaching majors. Teaching minors may be selected from the Music listings in Section A.)

Composite Music Education Major:

83 or 84-hour list: 190 (MT 21), 191 (MT 22), 192 (MT 23), 290 (MT 121), 291 (MT 122), 292 (new); 301 (MG 157), 302 (MG 161), 383 (MU 162), (6 hours which count as religion); 363 (new), 364 (ME 107), 365 (ME 105), 366 (ME 106), 367 (new), 368 (ME 115), 369 (ME 115), 370 (ME 111), 371 (ME 116), 372 (ME 112), 373 (ME 117) (the student omits the workshop in his specialty); 374 (new), 375 (new), 376 (new); 484 (MU 184), 485 (185); ensemble (6 hours); individual instruction in the student's specialty (18 hours)*; functional piano (6 hours)*.

Composite Vocal Major:

84-hour list: 190 (MT 21), 191 (MT 22), 192 (MT 23), 290 (MT 121), 291 (MT 122), 292 (new); 301 (MG 157), 302 (MG 161), 383 (MU 162), (6 hours which count as religion); 366 (ME 106), 374 (ME 112), 466 (MA 194) plus 3 quarters of piano accompanying, 484 (MU 184), 485 (MU 185), 566 (MA 188), 567 (MA 189), 568 (ME 218); individual instruction in voice (18 hours)*; vocal ensemble (9 hours); functional piano (12 hours)*.

Composite Instrumental Major:

86-hour list: 190 (MT 21), 191 (MT 22), 192 (MT 23), 290 (MT 121), 291 (MT 122), 292 (new); 301 (MG 157), 302 (MG 161), 383 (MU 162) (6 hours which count as religion); 375 (new), 376 (new), 484 (MU 184), 485 (MU 185); individual instruction in the student's specialty (18 hours)*; instrumental ensemble (9 hours); vocal ensemble (3 hours); functional piano (6 hours)*; 367 (new), 368 (ME 110), 369 (ME 115), 370 (ME 111), 371 (ME 116), 372 (ME 112), 373 (ME 117) (the student omits the workshop in his specialty).

*(The number of hours in the specialty or functional piano may be reduced in the case of students with considerable previous training in these areas. See Music Department section.)

HEALTH, PHYSICAL EDUCATION AND RECREATION:

Health:

36-hour list (Major): 121 (195), 310 (P.E. 172), 325 (157), 381 (new), 451 (131), 521 (224), 530 (new), 552 (new), and 15 hours chosen from the

following elective courses in consultation with an adviser in the Department of Health Education: Health 332 (110), 333 (new), 511 (new), 560 (240); Bacteriology 121 (21), 311 (160); Food and Nutrition 115 (5); Chemistry 101 (2); Human Development and Family Relationships 261 (15), 360 (160), 466 (new); Sociology 426 (160), 449 (136); Educational Research and Services 520 (new); Psychology 340 (113); Zoology 164 (45), 365 (165).

24-hour list (Minor or Dominant): 15 hours are to be selected from those courses required in the 36-hour list and nine hours are to be selected from the above elective list in consultation with an adviser from the Department of Health Education.

18-hour list (Related Subj.): 10 hours are to be selected from those courses required in the 36-hour list and 8 hours are to be selected from the above elective list in consultation with an adviser in the Department of Health Education.

Physical Education:

45-hour list for MEN (Major): 180 (80), 181 (88), 182 (89), 221 (51), 222 (52), 223 (53), 224 (54), 225 (55), 226 (56), 227 (new), 228 (new), 330 (130), 341 (141), 344 (140), 371 (101), 372 (102), 373 (103), 374 (104), 413 (133), 446 (146), 464 (154); and 2 hours selected from 206 (106), 207 (107), 314 (134), 511 (131), 542 (142), 543 (143); Health 326 (PE 175). Substitution for any of the above courses allowed only upon consultation and approval of the department chairman.

45-hour list for WOMEN (Major): 160 (60), 180 (80), 181 (88), 182 (89), 183 (87), 187 (81a), 188 (81b), 189 (81c), 241 (51), 242 (52), 243 (53), 244 (54), 245 (55), 246 (56), 330 (130), 341 (141), 344 (140), 413 (133), 446 (146), 464 (154); and 5 hours selected from 207 (107), 280 (Rec. 180), 314 (134), 375 (120), 376 (121), 542 (142); Health 326 (PE 175).

24-hour list for MEN (Minor, Dominant or Related Subjects): 180 (80) or 181 (88), 330 (130), 341 (141), 413 (133); 9 hours selected from the following courses: 371 (101), 372 (102), 373 (103), 374 (104); and 5 hours selected from 221 (51), 222 (52), 223 (53), 224 (54), 225 (55), 226 (56), 227 (new), 228 (new).

24-hour list for WOMEN (Minor, Dominant or Related Subj.): 180 (80), 181 (88), 182 (89), 183 (87), 187 (81a), 188 (81b), 189 (81c), 330 (130), 341 (141), 413 (133); and 8 hours selected from 241 (51), 242 (52), 243 (53), 244 (54), 245 (55), 246 (56).

Recreation:

24-hour list (Minor or Dominant Subj.): 201 (new), 387 (187) or 388 (188), 505 (new), 537 (137); and 13 hours chosen in consultation with the chairman of the Department of Recreation.

18-hour list (Related Subj.): 201 (new), 387 (187) or 388 (188), 505 (new); and 10 hours chosen in consultation with the chairman of the Department of Recreation.

(Note: The student may substitute for one of the above courses with the consent of the department chairman.)

SOCIAL SCIENCES:

Economics:

36-hour list (Major): 101 (1) and 102 (new), or 201 (new); 274 (74); 345 (145); 461 (161); 575 (167); and 10 to 13 hours of electives.

24-hour list (Minor or Dominant Subj.): 101 (1) and 102 (new), or 201 (new); 274 (74); 345 (145); and 6 to 9 hours of electives.

18-hour list (Related Subj.): 101 (1) and 102 (new), or 201 (new); 274 (74); 345 (145); and 0 to 3 hours of electives.

Geography:

40-hour list (Teaching Major): 105 (11), 110 (12), 223 (23), 275 (75), 310 (110), 560 (160) or 584 (176); and electives to total 40 hours credit chosen in consultation with the chairman of the Geography Dept.

24-hour list (Minor or Dominant Subj.): 105 (11), 110 (12), 223 (23), 310 (110); and 6 hours credit chosen in consultation with the chairman of the Geography Department.

18-hour list (Related Subj.): 105 (11) or 110 (12), 223 (23), 310 (110), and 5 hours credit chosen in consultation with the chairman of the Geography Department.

History:

45-hour list (Major): 110 (10), 111 (11), 120 (20), 121 (21), 366 (166); and 22 hours selected in consultation with the chairman of the History Department.

26-hour list (Minor or Dominant Subj.): 110 (10), 111 (11), 120 (20), 121 (21), 366 (166); and 3 hours selected in consultation with the chairman of the History Department.

20-hour list (Related Subj.): 110 (10), 111 (11), 120 (20), 121 (21).

(Note: Students may not use History 170 (70) or 180 (80) toward completion of the above requirements unless approved by the chairman of the History Department.)

Political Science:

45-hour list (Major): 110 (10), 111 (11), 112 (12) or 115 (15), 301 (101); and 27 hours selected in consultation with the chairman of the Political Science Department to include:
 one course from 301 (104), 303 (105), 306 (106), and
 one course from 310 (110), 515 (115), 320 (116), 322 (120), and
 one course from 330 (130), 532 (131), 335 (133), and
 one course from 350 (144), 355 (145), 556 (146), 557 (148), 560 (149), 362 (150), and
 one course from 565 (159), 370 (170), 571 (175), 375 (179), 376 (180), 580 (171), 581 (172), 582 (173), 583 (174), and
 one course from 375 (179), 376 (180), 391 (182), 595 (185), 396 (186), 397 (187).

24-hour list (Minor or Dominant Subj.): 110 (10), 111 (11), 112 (12) or 115 (15); and 9 hours selected in consultation with the chairman of the Political Science Department.

18-hour list (Related Subj.): 110 (10), 111 (11), 112 (12) or 115 (15); and 3 hours selected in consultation with the chairman of the Political Science Department.

Psychology:

37-hour list (Major): 111 (11), 320 (120), 321 (122), 360 (110), 365 (111), 370 (113), 374 (115), 378 (116); and at least 5 hours selected from 340 (143), 440 (130), 445 (145), 540 (139), 550 (140).

24-hour list (Minor or Dominant Subj.): 111 (11), 311 (112), 320 (120), 321 (122), 374 (115); and at least 4 hours selected from 340 (143), 378 (116), 440 (130), 455 (145), 540 (139), 550 (140).

19-hour list (Related Subj.): 111 (11), 311 (112), 320 (120), 321 (122); and at least 3 hours selected from 340 (143), 374 (115), 378 (116), 440 (130), 455 (145), 540 (139), 550 (140).

(Note: In order to complete professional education requirements, the student should complete E.R.S. 304 (100) rather than E.R.S. 305 (101).

Sociology:

44-45 hour list (Major): 111 (11), 112 (12), 303 (103), 320 (180), 322 (182); 325 (188) or 528 (189); 504 (104); and 16 hours selected from 117 (17), 310 (110), 314 (114), 380 (124), 389 (112), 392 (128), 400 (170), 402 (172), 420 (152), 423 (156), 426 (160), 440 (150), 443 (140), 449 (136), 512 (176).

26-hour list (Minor or Dominant Subj.): 111 (11), 112 (12); 303 (103) or 504 (104); 320 (180) or 322 (182); and 8 hours from 117 (17), 310 (110), 314 (114), 380 (124), 389 (112), 392 (128), 400 (170), 402 (172), 423 (156), 426 (160), 440 (150), 443 (140), 449 (136), 512 (176).

18-hour list (Related Subj.): 111 (11), 112 (12); and 8 hours selected from 117 (17), 310 (110), 314 (114), 380 (124), 389 (112), 392 (128), 400 (170), 402 (172), 420 (152), 423 (156), 426 (160), 440 (150), 443 (140), 449 (136), 512 (176).

TEACHER PLACEMENT

Placement of teachers is a function primarily of the University Placement Bureau, which works in close collaboration with the College of Education. All students are required to register in the Placement Bureau as a prerequisite to registration for student teaching, whether they have positions already assured or not. Registration before leaving the campus enables the office to be of service at later dates as new opportunities or new needs arise.

THE LABORATORY SCHOOLS

Director: Avard A. Rigby

Assistant Directors: John K. Crnkovic, curriculum; John W. Tucker, operations

The laboratory schools (kindergarten through twelfth grade) are maintained by the College of Education to assist in the preparation of teachers and in the improvement of educational programs. Students may secure valuable experiences there as part of their preparation for teaching. The laboratory schools are also intended to furnish a setting for research in child development, in learning, in social processes, and in the planning and conducting of educational programs. Use of these facilities is under the supervision of the director of Laboratory Schools, an assistant director of operations, and an assistant director of instruction. Interested faculty members and students should arrange visitations and demonstrations through the office of the assistant director of instruction.

In keeping with the laboratory functions of the school, pupils are frequently under observation and study, and the classes in the school are subject to various kinds of experimental treatment for the purpose of improving instruction. Regardless of these functions, however, the instruction is always kept at a high level of quality, since one of the principle purposes of the school is to demonstrate superior educational practices for the benefit of teachers-in-training and teachers-in-service.

Moral and religious education is a constant part of the instruction in these schools. Pupils are admitted under the assumption that they will adhere to L.D.S. Church standards of personal conduct, dress, and morality. Observance of these standards is a requirement for continued enrollment in the laboratory schools. Pupils are also required to observe the Utah compulsory school attendance law.

Enrollment in each grade of the laboratory schools is limited to the number of pupils who can be adequately cared for. Pupils are enrolled on the basis of priority of application and in conformity with the need for maintaining certain balances among pupils which are important to the laboratory functions of the school. Application for admission should be filed with the assistant director of operations. Forms for this purpose are available in his office.

Pupils who have been admitted may continue their schooling to the point of graduation from one of the colleges of the University if they so desire, providing they make normal progress, and observe the standards of conduct of the school. They have many of the advantages of the University plant, such as use of libraries, gymnasiums, laboratories, shops, athletic fields, auditorium, etc.

Elementary Laboratory School

The Elementary Laboratory School covers the range from the kindergarten through the sixth grade.

A staff of well-qualified instructors, together with the facilities offered by the University and the assistance given by student assistants and special supervisors, provides a wide range of experiences for the children. Much attention is given to individual needs and interests and to the development of special abilities.

The school serves as a laboratory in modern school practice for the preparation of teachers in the field of elementary education and for the use and observation of current educational theory.

Secondary Laboratory School

Pupils completing the first six grades are regularly transferred to the junior high school. Here departmentalization begins, permitting variation in courses and a wide range of contact with expert instructors. Broad exploratory experiences are provided.

Pupils completing the three years of work prescribed for the junior high school are admitted to the senior high school.

Pupils graduating from the senior high school the expected to complete sixteen units in three years. Equal credit is given in all subjects for equal amounts of time spent in the classroom. One unit of credit is granted for each class which meets five days per week for thirty-six weeks. All required classes must be included in the program of each pupil who qualifies for graduation.

AIMS AND REGULATIONS

It is the purpose of the high school to develop in its pupils habits of regularity, punctuality, and industry. Willing and serious application to the tasks at hand is considered of fundamental importance in meeting life situations. It is the aim of the school to have pupils work vigorously during the day in order to develop the above qualities and to minimize home preparation of lessons. To achieve these aims, the following regulations apply to those enrolled:

(1) Pupils will be held accountable to the school at all times from the beginning of the school day schedule until the end. A pupil is expected to register for regular class work each period of the day. Permission should be obtained from the teachers and the assistant director if pupils are required to leave the school at any time during the day. Special permission should be obtained prior to the departure.

(2) Students are required to take the regulation courses in physical education during residence at this school. Students are released from this requirement only upon statement of physical disability signed by a physician. Satisfactory grades in physical education courses are required for graduation.

ACTIVITIES

Under the direction of the faculty and the student body organization, a rich program of athletic and social activities is provided for secondary school pupils.

All high school groups have regular social gatherings and recreational activities under faculty supervision and guidance under whose sponsorship pupils participate in interscholastic athletics, speech arts, music and commercial competition. The school is a member of the Utah High School Activities Association. In

addition to these opportunities for extra-class activities, a regular high school student body organization is maintained with the various activities that naturally are sponsored by such organizations. The high school students have also the advantage of participation in selected activities of the University student body.

Pupils who register late, who discontinue before the end of the school year or who miss a portion of their work during the school year, can receive no higher grade than "Incomplete" until the required work of the course is completed. An incomplete grade carries no credit. An "Incomplete" grade can be removed by the pupil if he completes the required classwork during the next succeeding six-week term.

ACCREDITATION

Brigham Young University High School meets all requirements of the Utah State Board of Education, and it is accredited by the Northwest Association of Secondary and Higher Schools.

Secondary School Curricula

JUNIOR HIGH SCHOOL

It is the philosophy of the junior high school that certain areas of work should be organized around student needs into a "core" program. By having students remain with one teacher for a two-hour period, it is believed that greater strides may be made in guiding the pupil in solving his personal problems, in integrating his school activities with those which he carries on in the community, in developing a wholesome personal outlook, and in developing basic skills and acquiring factual knowledge commensurate with his level; therefore "core" classes have been set up in the seventh and eighth grades.

7th Grade Subjects:

Required: Physical education, "core" curriculum (English, social studies, and religion), mathematics, music or band, art, speech, industrial arts, homemaking.

8th Grade Subjects:

Required: Physical education, "core" curriculum (English, social studies, and religion), general science, history, mathematics, music or band, speech, art, industrial arts, homemaking.

9th Grade Subjects:

Required: Art, physical education, English, social studies, religion, general science, mathematics, music or band, homemaking, industrial arts.

SENIOR HIGH SCHOOL

Students desiring to graduate from the B.Y.U. High School and to qualify for college entrance at the same time must complete the following requirements.

1. A total of sixteen units is required in grades 10, 11, and 12. A unit of credit is given for any subject that is taken five times a week for 36 weeks.
2. Two years of physical education must be taken while in the senior high school, one of which should be taken in the sophomore year. Students who have some physical disability may be excused from this requirement if they have a statement from their family doctor confirming the fact of their disability.
3. One unit of mathematics selected from algebra, geometry, or general mathematics.
4. Three units of language arts.

5. United States history and either problems of democracy or development of civilization.
6. One unit selected from chemistry, physics, physical science, or biology.
7. While at Brigham Young High School, the prescribed courses in religious education must be followed satisfactorily by all students. One religion class each year is required.
8. The following courses are suggested and recommended but not presently required:

Music or art - $\frac{1}{2}$ unit

Homemaking or industrial arts - $\frac{1}{2}$ unit

Special courses may be planned for those high school students who do not intend to be officially graduated from high school or who do not intend to go to college.

If it is deemed advisable, outstanding senior students may secure permission from the principal to take a maximum of 6 quarter hours of college credit each quarter. Under no circumstances may graduation requirements be completed with less than four classes in the senior year.

SENIOR HIGH SCHOOL COURSES

Subject	Days		Year Taken	Credit
Art I and II	5	Elective	10-12	1 unit
Industrial Arts I and II	5	Elective	10-12	1 unit
Business				
Shorthand, Elem.	5	Elective	11-12	1 unit
Shorthand, Adv.	5	Elective	11-12	1 unit
Typing, Elem.	5	Elective	10-12	1 unit
Typing, Adv.	5	Elective	10-12	1 unit
Bookkeeping	5	Elective	10-12	1 unit
Language Arts				
Composition, Grammar, and American Literature	5	Required	12	1 unit
Grammar and Literature	5	Required	10	1 unit
English Literature	5	Required	11	1 unit
Publications	5	Elective	10-12	1 unit
Journalism	5	Elective	10-12	1 unit
Homemaking				
Homemaking	5	Elective	10-12	1 unit
Home Living	5	Elective	10-12	1 unit
Home Management	5	Elective	12	1 unit
Adv. Foods and Clothing	5	Elective	11-12	1 unit
Language				
French 1	5	Elective	10-12	1 unit
Spanish 1	5	Elective	10-12	1 unit
Mathematics				
Algebra I	5	Elective	10-12	1 unit
Geometry*	5	Elective	10-12	1 unit
Arithmetic (Bus.)	5	Elective	10-12	1 unit
Basic Skills	5	Elective	10-12	1 unit
Algebra II	5	Elective	10-12	.5 unit
Music				
Chorus	5	Elective	10-12	1 unit
Band	5	Elective	10-12	1 unit

Physical Education

Physical Ed. (Girls)		Required	10-12	1 unit
Physical Ed. (Boys)		Required	10-12	1 unit
Driver Education**		Elective	10-12	

Religious Education

Religion 2	5	Required	10	1 unit
Religion 3	5	Required	11	1 unit
Religion 4	5	Required	12	1 unit

Science

Physics*	5	Elective	11-12	1 unit
Chemistry*	5	Elective	11-12	1 unit
Biology	5	Elective	10-12	1 unit
Physical Science	5	Elective	11-12	1 unit

Social Science

United States History	5	Required	11-12	1 unit
World History*	5	Elective	10-12	1 unit
Problems in Democracy*	5	Elective	11-12	1 unit

Speech

Speech	5	Elective	10-12	1 unit
Advanced Speech	5	Elective	11-12	1 unit
Speech Workshop	5	Elective	10-12	1 unit

*These subjects are only partially elective as either one or the other in each group must be taken.

**Driver education is offered on an elective basis as part of the regular physical education program. No extra credit is earned.

College of Family Living

Marion C. Pfund (until July 31, 1958), Dean (1206 SFLC)

Jack B. Trunnell (effective August 1, 1958), Dean

The following departments are in the College of Family Living:

Clothing and Textiles
Economics and Management of the Home
Food and Nutrition
Homemaking Education
Housing and Design
Human Development and Family Relationships

Name. Family living has been selected as the name for the college rather than the more familiar name of home economics because family living is more comprehensive and more indicative of the broad objectives of the college. The name reaches out to include relationships among the members of the family as they live within the home and the community as well as the economic aspects of the home.

Objectives. The program of the College of Family Living is designed to provide educational experiences which will help young men and women

- (1) to understand themselves and their abilities,
- (2) to establish attractive and happy homes in which primary consideration is given to the enrichment and strengthening of family life,
- (3) to accept the responsibilities of family members as citizens and members of the community, and
- (4) to earn a living in a profession related to homes and families.

These aims are based upon the conviction that abundant living evolves primarily from the happy family. Such objectives have their roots deep within the culture of the L.D.S. people. Family life is the matrix of spiritual development, the foundation of society, and the basic unit of the Kingdom of God.

Marriage and motherhood form the primary focus of living for most women, even though many lead a full occupational life for periods before marriage and may have other full occupational periods after children are grown. For men, the primary focus is achievement in the occupational system; they are expected to be the bread winners throughout life. For the part of her life during which the woman is almost solely wife and mother, her presence in the home may be practically continuous. The father, on the other hand, is at his job most of the day; thus, he usually has less continuous contact with the family than does the mother.

The difference in the roles of the husband and wife has definite implication for the education of the two sexes. It suggests that at least in the area of home and family, the woman's preparation may need to be more specific and extensive in several areas of home maintenance and family relationships than is the man's. The demands in the field of his major work through which he is preparing himself for occupational life after he receives the bachelor's degree may not permit a man to elect many hours of work in the College of Family Living. Ideally, however, he should have some acquaintance with all the areas that the woman has.

For the convenience of men students, one-hour courses are given in the Departments of Clothing and Textiles and Food and Nutrition. In addition, general courses in other areas would interest him; especially helpful would be a course in human development and family relationships. Relationships are important to him both in his home and family life and in his occupational life. At the present time only an occasional vocational outlet occurs in a field related to family living for a man with a bachelor's degree. An ever-increasing demand exists, however, for men with M.S. or Ph.D. degrees in the field of human development and family relationships.

Many courses are particularly adapted to meet the needs of men and women students who do not carry major work in a department of the college. A number of courses in the Department of Human Development and Family Relationships serve to help fulfill the University program in general education for the social science group; thus, many men and women may be attracted to these courses. Every student is urged to elect at least one course which will so enrich his life that he will become a better family member.

Scope. The experiences of family living involve the discoveries of science, the insights of the humanities and the fine arts, and the inspiration of religion and recreation, all taught in other colleges of Brigham Young University. Their resources are used liberally in an endeavor to integrate and organize educational experiences which increase human capacities to participate in effective family and community living.

Curriculum. The curriculum of the college is geared partially to the cultivation of competency in coping with the vital daily activities involved in homemaking; the creation and maintenance of an environment of beauty within the home; the preparation of nutritious meals; the effective use of energy, time and money; the creative use of leisure and the capacity to meet the stresses incident to crises. The broad philosophy of family living, however, goes far beyond the learning skills, important as they are. The creation of healthy families and happy homes is one of the foremost challenges faced by our society. The daily tasks involved in parenthood constitute one of life's greatest sources of joy, also one of its most important responsibilities. The college curriculum is geared, therefore, to help men and women recognize the challenge and meet the responsibility towards the end that joy may be fully realized. "Man is that he might have joy."

To the extent that the needs of today's families are understood, course offerings in the college are related to those needs for both men and women students. Within the framework of the curriculum the entire cycle of family life from infancy to old age is considered. The expectancy of early marriage and parenthood and of large families is faced and discussed. The importance of the role of men as partners in homemaking is increasingly emphasized. The prolonged period in the lives of men and women after children have been reared becomes part of the thinking and planning of the college student. The many patterns of family living, each with its own economic level, educational background, and cultural heritage, are considered with a view toward the contribution each can make to our families. The important task of preserving and enhancing the integrity of the family is given a primary place. Educational experiences are directed toward the realization of increased understanding of human development and human relationships and toward the realization of increased maturity in personal, family, and community living. The ever-expanding demands made on men and women to participate and assume leadership of the community are stressed.

Professional Opportunities. The course offerings are also designed to supply factual material necessary to prepare students for selected professional service: teaching in specialized areas within educational institutions and nursery schools; working in community child welfare agencies, departments of recreation, and youth organizations; working in commercial test kitchens, in home service centers and in the field of dietetics; or working in consumer education, in extension service as county home agents or in journalism related to the home and family.

Informal Instruction. An important aspect of the College of Family Living is the consultant-teaching service offered to men and women who request assistance with problems of grooming; etiquette; budgeting; care, selection, remodeling, or construction of clothing; daily tasks of management; use of equipment; and purchase and preparation of food for themselves or groups. The college has a laboratory office in the basement of Rogers Hall. Thus, through out-of-class informal experiences, men and women are helped to meet practical problems involved in personal and group living and in personal and social development.

College Clubs: Home Economics Club; Gamma Phi Omicron. The Home Economics Club is affiliated with the Utah and the American Home Economics

Associations. The club is the professional organization for students in the college. Membership is extended to all students interested in home economics. The goals of the club are to work together and share with others enthusiasm for happy home living; to promote friendly association between the faculty of the College of Family Living and all students in the University; to participate actively in the affairs of the college; and to seek an understanding of many peoples by studying their cultures. Regular meetings are held each month at which interesting lectures are given, discussions held, or special activities are fostered. Club members have opportunities to develop leadership abilities, acquire professional attitudes, and gain friends through working together.

Gamma Phi Omicron is a local honor organization of upper class women in the College of Family Living. When the society was established, membership in the Home Economics Club and a high scholastic average were prerequisites to membership. Its purposes are to foster a professional attitude and to establish a circle of friendship among its members. They lend their aid in the promotion of wholesome group living, and they participate actively in the affairs of the college, the University, and the community.

Graduates of the college automatically become members of the B.Y.U. Alumni Association and as such receive the ALUMNUS as long as a correct address is known. Graduates of this college also become members of the College of Family Living Alumnae Association.

Scholarships and Awards. University scholarships covering from one to three quarters tuition are granted annually by the University to undergraduate students of outstanding academic ability, and grants-in-aid to deserving students of good academic ability who have economic need. All applications are made to the chairman of the B.Y.U. Committee on Scholarships and Awards.

A HOME ECONOMICS CLUB AWARD of approximately \$135.00 toward the combined winter and spring tuition is available each year to a woman student in the college who is an active member of the club and who has been of service to it for at least part of two academic years. Applications must be made by March 15th to the College Scholarships and Awards Committee on forms available in the office of the dean of the college. Election will be made by club members by ballot. Applicants must have a grade-point average of 2.65 (A is 4) or above with no D on the record; must have completed at least five quarters and 75 credit hours in the University; must have a total credit at the time of application of no more than 115 credit hours and must have completed physical education, 3 hours; English, 9 hours (6 if this fulfills her freshman English requirement); chemistry, 9 hours; psychology, 5 hours; bacteriology, 4 hours; food and nutrition, 4 hours; and Health 130, 2 hours.

Timpanogos Federated Women's Club Scholarship. The sum of \$100.00 toward tuition will be awarded to a junior of high scholastic standing in the college, good character and professional promise whose home is in the Timpanogos area.

Gamma Phi Omicron Alumnae Scholarship. The sum of \$100.00 toward tuition will be awarded to a deserving junior who is a member of Gamma Phi Omicron, has a scholastic average of 3.0 or higher, is in financial need, and shows professional promise.

Senior Awards. For many years recognition awards have been given annually to members of the senior class:

The Leah D. Widtsoe silver loving bowl, to a senior of sterling character who has made marked progress during her years of study and who at the same time has rendered service to her classmates, her college, and the University.

The Hazel Noble medal to an outstanding graduating senior with fine womanly qualities, and commendable professional attitude who applies to her daily living the knowledge acquired in her studies in the college.

The Gamma Phi Omicron award, to a senior of high scholastic standing and good character who, as indicated by her accomplishments and services during

her college career, shows promise of becoming a credit to her college and her profession.

Affiliation with the Merrill-Palmer School. The college is affiliated with the Merrill-Palmer School of Detroit, Michigan. This school, established 35 years ago when little endeavor or experience in education for home and family life existed, has the underlying philosophy expressed in a quotation of Lizzie Merrill Palmer: "I hold profoundly the conviction that the welfare of any community is divinely, and hence inseparably, dependent upon the quality of its motherhood, and the spirit and character of its home."

At present we are privileged to send to the school several students a year. Before she leaves campus, each student is advised by her counselor. At the school a staff adviser assists the student to plan a course of study whereby her former experiences are augmented and effectively related to her personal needs and potentialities. A basic course having a multi-disciplinary approach is focused on the development of the individual with special reference to the contribution made by the family. Considered also are changes taking place in the social, economic, and political world which affect marriage and the establishment and maintenance of families.

Classes and discussion groups are small. Observation and experience are a vital part of the program. Among the special fields represented by the staff at Merrill-Palmer are psychology, sociology, nutrition, gerontology, child development, nursery education, family life and adult education, marriage counseling, home economics, and religion.

The entire program is intercultural, and the student body is a cross-cultural group coming from many foreign lands as well as from all parts of the United States. A student from Brigham Young University would therefore have to be a worthy representative of the Church. She would also need to have an A-B record. Credits earned are allocated to the subject-matter fields by the Brigham Young University in terms of its requirements.

Graduate Study. A student who has completed all requirements for the bachelor's degree is classed as a graduate student. The work of all graduate students is under the jurisdiction of the dean of the Graduate School. The College of Family Living provides opportunities for work toward two Master of Science degrees, one in human development and family relationships (Graduate School Bulletin) and the other in the general field of family living.

GRADUATION

Advisement. Each student registered in the college has a faculty adviser who will help in the selection of courses and the planning of a desirable schedule. The adviser will also check the student's academic progress and help him use the resources of the University to the greatest advantage.

Students are urged to complete a four-year program. If emergencies arise which make a four-year program impossible, the first-year program is planned so the student gains some experience in the areas of homemaking as well as in general education.

University Requirements. The University believes that educated men and women should have breadth of knowledge and understanding. As a guide toward such attainments, a basic unit of 85 credit hours, selected from a wide variety of subjects, is required for graduation. This general education group includes physical sciences, 9 hours; biological sciences, 8 hours; social sciences, 15 hours; humanities and aesthetics, 15 hours; religion, 24 hours; English composition, 9 hours; and physical health and education, 5 hours.

The University requires a minimum of 186 credit hours for graduation. At least 45 hours must be completed in residence; at least 60 hours must carry upper-division credit (courses marked 300 or above); a major of at least 30 hours and a minor of at least 20 hours shall be included. The successful comple-

tion of the program leads to a Bachelor of Science degree. If 24 hours of college credit in a foreign language is acquired, a Bachelor of Arts degree may be awarded. Otherwise, the Bachelor of Science degree is given.

College Requirements. Graduates of the college are expected to have some competency in the several areas which, combined, comprise the broad field of home and family. To this end the college requires that among the 186 credit hours necessary for graduation from the University, women students shall elect a minimum of 60 and men students a minimum of 50 hours in courses offered by different departments within the college. Nursing 288 and Recreation 371 may be included as part of the 60 or 50 hours of work required respectively for women and men students. Among these hours is included the work for the major. The minor may be included.

Minors. Any student in the college may complete a minor in any department in the University. Minors in related departments outside of the college such as art, business management, chemistry, journalism, psychology, sociology, or speech may be useful in preparing for professional work.

A student carrying a major within or without the college may complete a departmental minor by selecting 20 hours within any one of the departments or a composite minor by selecting 20 hours distributed among several departments in the college. Women students registered for major work in other colleges of the University might help prepare themselves for the responsibilities of marriage by electing 3 to 5 hours from each of the following groups. Other courses may also be elected.

	Hours		Hours
Human Development and Family Relationships		Housing and Design	
160 Found. for Marriage	2	120 Weaving	2
*210 Child Development	3	135 Household Equipment	3
*211 Lab. Observation	1	*360 Home Furnishings	2
*322 Exper. with Children	3	*375 Housing	3
360 Achiev. Suc. in Mar.	3	Economics and Mgt. of the Home	
361 Family Relationships	3	130 Management Eff. Living ..	3
440 Family Life in		*325 Family Finance	3
Later Years	3	*350 Simp. of Hsehold. Tasks..	2
Food and Nutrition		Clothing and Textiles	
110 Intro. Food and Nutr.	4	105 Elem. Clothing Const.	2
130 Food Preservation	2	110 Selection and Care	2
170 Food Mgt., large		115 Design and Construction ..	3
groups	4	260 Textiles	3
*240 Meal Management	4	370 Consumer Problems in	
245 Nutr. Mother and Child....	3	Cl. and Household Textiles..	2

*Courses have prerequisites.

Majors. A student may complete a major in the Departments of Clothing and Textiles, Food and Nutrition, Homemaking Education, or Human Development and Family Relationships, or in the combined departments of Economics and Management of the Home and Housing and Design by selecting 30 or more credit hours of appropriate work.

Through the selection of specified courses, a student may become certified for the teaching of homemaking (page 118) or for teaching at the elementary level (page 110.)

A non-departmental major-minor composite is offered in the broad field designated as Family Living, General; the completion of a minimum of 60 hours of course work distributed among five departments is required. Frequently, students who are not certain as to their major interest begin their work in the general field but select a departmental major by their sophomore year or earlier.

Suggested programs for departmental majors and for the Family Living,

General program will be found listed among the departments. These programs are such that their successful completion should prepare a student to assume the responsibilities of marriage and also to earn a living in a field related to family living. Before selecting a major, students should have in mind specific jobs in which they are interested. Each student should check carefully with her adviser to be certain that jobs are available in the field in the section of the country in which she wishes to live.

All students registered in the college should elect Family Living 101 during Autumn Quarter for the freshman year. For course description see p. 245.

All students registered in the college shall elect two specified groups of courses, A from without and B from within the college.

The courses in Group A, in addition to serving as a part of the group needed for general education, provide a background for work in the college; thus, they should be elected in the freshman and sophomore years. The courses in Group B will help familiarize the student with work in all departments of the college, a desired objective since all are involved in the activities of the home.

A. Courses in departments outside of the college:

Hours

G-PS: Chemistry 101 and 102 Inorganic and Organic or their equivalent	9
Physics 104	3
(Majors in the Department of Human Development and Family Relationships may arrange to fulfill the physical science requirement in other ways.)	
G-BS: Bacteriology 121 General	4
Zoology 105 General Zoology or Zoology 164 Human Physiology	5
G-SS: Agr. Ec. 101 Economics and Agriculture or Economics 101 Principles and Problems	5
Psychology 111 General	5
G-HA: Art 110 Theory and Practice of Design	2

B. Courses in departments within the college:

Hours

For women the 60 credit hours shall include courses in

Clothing and Textiles (CT)	4
Economics and Management of the Home (EMH)	3
Food and Nutrition (FN)	4
Housing and Design (HD)	3
Human Development and Family Relationships (HDFR)	6

20

Courses in the major department 30 or more

Other courses in any department(s) in the college enough to make 60 hours or more

For men the 50 credit hours shall include courses in

Economics and Management of the Home	3 to 6
Food and Nutrition 110 (or 115 required; another may be elected) ..	3 to 6
Housing and Design	3 to 6
Human Development and Family Relationships	6

18

The major department of the college 30 or more

Any department or departments in the college enough to make 50 hours or more

Required: at least four courses in the first three departments listed with a minimum of 3 credit hours in each department and a minimum total of 12 hours in the three departments, also 6 credit hours in Human Development and Family Relationships.

College of Fine Arts

Gerrit de Jong, Jr., Dean (240 C)

The following departments are in the College of Fine Arts:

Art

Music

Speech and Dramatic Arts

The policy of the University has always provided for a liberal patronage of the fine arts. A constantly growing desire to offer greater opportunities for better coordinated academic and professional growth to those whose inclinations and talents lead them into the various fine arts resulted in the organization of the College of Fine Arts in 1925.

With exceptionally well-prepared faculties, who have received the benefits of extended study in recognized schools and art centers, and adequate physical equipment in all departments, the College of Fine Arts has become favorably known for the artistic and academic work done under its direction.

Any course offered in this college that leads to the baccalaureate degree is the cultural equivalent of other college courses offered in the University, differing from them mainly in respect to the emphasis placed on the study of the fine arts.

The Art Department offers curricula in painting, sculpture, crafts, interior design, commercial art, graphics, and art for teachers in the elementary and secondary schools.

The Music Department lists courses in theory of music; musicology; applied music, both instrumental and vocal; music education for elementary and secondary school teachers; and general music for non-music majors.

The Department of Speech and Dramatic Arts lists courses of study in public address and forensics, radio and television, theatre and dramatic arts, speech and hearing rehabilitation, speech education for elementary and secondary school teachers, and general speech for non-majors.

MAJORS AND MINORS

Majors are selected from the work offered in the above-mentioned departments; minors may be selected from them or from other departments in the University which offer allied work.

General College

General College, the newest academic college of the University, admits its first students Fall Quarter 1958. Major purposes of the college are to provide programs of general education and semi-professional and technical training.

A two or three-year course of study is offered leading to an associate degree in the arts or in the sciences. It is also possible to take four years of work in semi-professional training and thus qualify for a Bachelor of Science degree. Semi-professional and technical training is provided in the following areas:

Engineering (Technicians)

Industry (Technicians)

Business (Secretarial work)

Students who are not interested in one of the above fields may choose the curriculum outlined in general education and in this way qualify for an associate degree.

The same entrance requirements and academic standards pertain to this college as to the University as a whole. General education requirements are similar to those of the other colleges. It is intended that students may transfer freely from the General College to any of the other academic areas of the University. As a result, undecided students—those who have not selected a major subject—will usually find it to their advantage to enroll in the General College.

It is anticipated that a special brochure on the General College, giving course offerings and requirements for graduation under the two-, three- and four-year programs, will be available prior to registration in September 1958.

College of Humanities and Social Sciences

Leonard W. Rice, Dean (329 McK.)

The following departments are in the College of Humanities and Social Sciences:

Archaeology
English
Geography
History
Journalism
Languages
Political Science
Psychology
Sociology

The most fascinating study has always been man—what he has done, what he has thought, what he has said, and how he has reacted to problems confronting him.

The humanities seek to discover, preserve, and disseminate the best of man's thoughts and creations. The social sciences study the activities and relationships of man: his nature, his power to communicate, his environment, what motivates him, how his activities progress, the institutions he has created, and the important social and governmental problems with which he must deal. The humanities and the social sciences are therefore related disciplines whose purpose is to help man live in the most intelligent and satisfying manner.

The humanities are the study of what man has created, including his language, literature, art, and the record of his activities as revealed in archaeology and history. The social sciences are younger disciplines utilizing the modern methods of science: controlled observation, laboratory experimentation whenever possible, statistics, and analytical reasoning. Their potential significance for a troubled world is tremendous.

There are two large purposes for which the instructional program of the College of Humanities and Social Sciences is designed. One is the provision of a broad and liberal education, to assist those who obtain it to receive in the fullest measure the values to be found in the complex civilization of today and to contribute to the enlargement of those values in an effective and acceptable manner. The other is the preparation of a more limited group as qualified contributors to the discovery of additional truth to add to our present heritage and as capable professional participants in the productive affairs of daily living.

Courses intended to contribute to the first purpose are offered as a service to all students in the University. Career programs for those who choose to do their major work in this college are offered in each department. Advisers stand ready to consult with students in the selection of studies that will contribute most effectively to a broad education and to specialized training in each department.

Pre-Legal Course

There is no single prescribed pre-law program. A student may major in any one of several fields as basic preparation for law school. The prime requisite of a successful lawyer is a well-disciplined mind. It must be readily capable of embracing complex situations—identifying subtle distinctions and appraising arguments. It must be able to weigh opposing considerations and be capable of sustained effort over long periods of time. To produce such a mind, the college schedule should include courses intended to expand the mental powers of a student to the utmost and to bring about precision of thought.

The following important advice given by a leading law school may well be noted by pre-legal students:

"Few ideas are more fallacious or harmful than the notion that it is possible to dawdle through high school and college and then make the adjustment to higher standards promptly upon entering the professional school. Essential habits of concentration and effective methods of study must be acquired and developed during the pre-legal years."

In addition to the courses in general education prescribed by the university, it is suggested that a satisfactory pre-legal course might be selected from the following fields: English, political science, history, economics, accounting, psychology, speech, sociology, and mathematics.

Because of the growing tendency of law schools either to recommend or demand that the entering student have a B.A. or B.S. degree, the pre-legal student should plan his freshman and sophomore programs toward the acquisition of a bachelor's degree.

College of Physical and Engineering Sciences

Armin J. Hill, Dean (294 ESC)

The college is divided into nine departments as follows:

- Air Science
- Chemical Engineering Science
- Chemistry
- Civil Engineering Science
- Electrical Engineering Science
- Geology and Geological Engineering Science
- Mathematics
- Mechanical Engineering Science
- Physics

The Department of Air Science is under the direct supervision of regular officers of the United States Air Force. A description of the activities of this department and the requirements for entrance and graduation are given on page 165.

ENTRANCE REQUIREMENTS

In addition to having fulfilled the general entrance requirements of the University, a student entering the College of Physical and Engineering Sciences should have completed successfully the following high school courses:

- 3 units of English
- 3 units of mathematics
- 1 unit of physical science

The three units of mathematics should include elementary algebra, intermediate algebra, plane geometry, and either trigonometry or solid geometry. The physical science courses should include either physics or chemistry.

A student who has not met these requirements must take extra remedial courses as prescribed by the chairman of the department of his selected major before, or concurrently with, the regular course of studies outlined for his department.

PHYSICAL SCIENCES

The four departments in the physical sciences offer a four-year course leading to the degrees of Bachelor of Arts or Bachelor of Science. Candidates for graduation in these departments must meet the general university requirements for such degrees and also must meet the special requirements which are outlined in each department.

The majors offered in these departments leading to a four-year degree are in chemistry, geology, mathematics, physics, pre-dental chemistry, and pre-medical chemistry.

ENGINEERING SCIENCES

A five-year course in geological engineering science, given in the Department of Geology and Geological Engineering Science, leads to a degree of Bachelor of Engineering Science in Geological Engineering. Similar courses are offered in the Chemical Engineering Science, Civil Engineering Science, Electrical Engineering Science, and Mechanical Engineering Science Departments, leading to degrees in these areas.

A student completing the prescribed course of study in engineering science will receive a broad and comprehensive training in engineering, in addition to the general and religious education given to all undergraduate students at Brigham Young University.

REQUIREMENTS FOR THE BACHELOR OF ENGINEERING SCIENCE DEGREE

To obtain the degree of Bachelor of Engineering Science the student must fulfill the same general educational requirements which apply to the B.S. degree conferred by the Brigham Young University. In addition he must complete the required courses in one field of engineering as described under the respective departmental headings. A total of 245 credit hours is required.

Students who complete the A.F.R.O.T.C. program and who are candidates for the five-year degree may substitute three hours of air science for three hours of required physical education. They may also substitute three hours of air science for any of the general education requirements.

College of Recreation, Physical and Health Education, and Athletics

Milton F. Hartvigsen, Dean (204 SFH)

The following departments are in the College of Recreation, Physical and Health Education, and Athletics:

- Health Education (and Safety)
- Intercollegiate Athletics
- Physical Education - Men
- Physical Education - Women
- Recreation
- Youth Leadership

The following additional areas are given special attention:

- Dance
- Intramural Sports
- Pre-Physical Therapy

This newly formed college, unique in American universities, has two significant contributions to make: service and development of leadership.

Outstanding in its services are those functions which contribute to student life. The physical education program provides vigorous participation in specific physical activities which are the cultural heritage of American youth. Basketball, modern dance, skiing, swimming, tumbling, folk dance, football, field sports, gymnastics, softball and other activities provide opportunity for development, expression, and normal participation.

Those students with specialized skills in athletics are encouraged by well-coordinated programs in intramurals and in intercollegiate athletics. Through affiliation with the Mountain States (Skyline) Conference, there are opportunities for competition in basketball, football, golf, wrestling, track, baseball, and tennis. Varsity squads frequently make tours across the country meeting teams of other universities.

This college takes initiative in developing leadership for both new and established professional areas. The opportunity for leadership by educated men and women is always unlimited. The demand is particularly high for those whose professional areas lie within this college. Professional training is emphasized in these major fields: recreation, scouting education, physical education, and health education. Certification for teaching in Utah may be completed and certification for teaching in other states may be arranged readily. Dance and pre-physical therapy are given attention as areas in which students may specialize.

Brigham Young University is the first university to offer a major in scouting education. The program is two-fold: the training of men for professional scouting and the preparation of men to serve the church and community in youth leadership capacities.

Brigham Young University alumni have gone to all points of the globe and have actively guided church members and communities to the ends of abundant and wholesome living. The Church of Jesus Christ of Latter-day Saints, through its beliefs and its teachings, has developed a real heritage in health practices and in family, church, and community recreation. The Brigham Young University, in harmony with the objectives of the Church, plans not only for participation of its members, but prepares for an active and ongoing leadership.

Department of Recreation. This department has a number of basic functions in fulfilling its responsibility to the students, the university, the church, and the nation. Among the responsibilities specifically recognized are (1) to prepare professional recreation leaders, (2) to qualify voluntary leaders for church and

community, and (3) to provide activities for students and faculty. To achieve these goals, this department has developed an expanded curriculum and secured many new facilities; others are being planned for the immediate future and a highly trained staff is being assembled.

The general purpose of the expanding intramural program is to afford all students the opportunity to take part in a well-organized program which includes a wide range of activities. An extensive program for both men and women is provided.

Departments of Physical Education. These departments, one for men and one for women, work together in providing (1) service courses, (2) professional training for prospective teachers of physical education and athletic coaching on the undergraduate and graduate levels, (3) special curricula in dance and pre-physical therapy.

Many courses are coeducational. Courses of specific interest, such as boxing, wrestling, and field hockey, are on a non-coeducational basis.

Physical education aims to develop organic power, physical fitness, skill in activities and enthusiasm for useful and desirable pursuits for use during lifelong leisure time. It also aims to develop social habits and attitudes directed toward the preparation of students for leadership roles in college, church, family, and community life.

Department of Youth Leadership. The objectives of the Department of Youth Leadership are two-fold: to train college men in the basic knowledges and skills of the scouting program to the end that they can serve better their church and the community in which they live and to provide training for prospective professional career men in youth leadership for the Boy Scouts of America and other allied organizations.

The need for trained youth leaders is greater now than at any time in the history of the world and does not lessen with increased population.

It is our sincere hope that each male member of Brigham Young University student body will avail himself of this specialized training so that he may be prepared to help either his church as a volunteer or his nation as a professional scout.

Department of Health Education. In this department emphasis is placed on the educational aspects of health including safety and driver education as well as instruction in the health sciences. This department, as well as other agencies, functions in the promotion of proper health attitudes and practices. It also co-operates with the home, university health centers, physicians and dentists, public health departments and other groups which have a responsibility in the promotion of health. The health curriculum deals primarily with health instruction where stress is placed on personal hygiene, sanitation, nutrition, and personal safety practices. Courses are offered for all students and for teachers working toward certification in public schools of the state.

Department of Intercollegiate Athletics. Brigham Young University is a member of the Mountain States (Skyline) Conference and the National Collegiate Athletic Association. The school competes in all sports sponsored by the conference.

The athletic program at Brigham Young University serves as a vital educational training ground and laboratory dedicated to teaching young men important individual traits which will better enable them to perpetuate the American tradition. The program is designed to develop such characteristics as capacity to lead and direct, respect for discipline and authority, social and moral understanding, ability to act effectively under stress, capacity for self-discipline in the interest of accomplishment, and determination to overcome obstacles. Individual and team play promotes cooperation, sportsmanship, health, strength, and bodily vigor in the participants.

Graduate School

A. Smith Pond, Dean (356 McK)

General Information

PURPOSE

The Graduate Division of Brigham Young University was established as an administrative unit in 1922, 47 years after the founding of the Brigham Young Academy in 1875. The objective of graduate study was then stated in these terms: "The essential aim . . . is to develop the power to do independent work and to encourage the spirit of research. Each candidate is expected to possess a broad general knowledge of his major subject with less detail in the case of his minor subjects."

Educational institutions such as Brigham Young University reflect the aspirations and problems of the American people. They carry the ideals, dreams, and hopes of democracy from generation to generation. Their ranks must be filled with men and women trained in the skills, the arts, and the sciences and dedicated to a higher spiritual understanding through which all men can work for the common good.

GRADUATE COUNCIL

The chief administrative body of the graduate faculty is the Graduate Council, which consists of (1) the academic vice-president of the University, the dean of the Graduate School, and the director of research, ex officio; (2) four members of the graduate faculty elected at large for terms of three years; (3) eight members of the graduate faculty, one elected from each of the eight colleges in which there are departments offering graduate work; and (4) one member elected to represent the Division of Religion. The Graduate Council is empowered to act for the graduate faculty on all student petitions and on departmental requests for approval of faculty members for graduate instruction and supervision. It is the responsibility of the graduate faculty to formulate and recommend requirements for all graduate degrees and to recommend regulations and facilities to promote the scholarly activities and research interests of graduate students.

FACULTY

The faculty of the Graduate School consists of those who hold the rank of professor or associate professor, assistant professor with a doctorate degree, and others approved by the Graduate Council.

ADMINISTRATION OF THE GRADUATE PROGRAM

Subject to review by the President, the administration of the graduate program is vested in the Graduate Dean and the Graduate Council, which in turn delegates the operation of the specific program in any given area to the department involved.

SCHOLARSHIPS, ASSISTANTSHIPS AND FELLOWSHIPS

Fellowships and Scholarships. The University has established the following fellowships and scholarships for graduate students:

- 10 fellowships which provide for free tuition and remission of fees plus \$1,000.
- 5 scholarships which provide for free tuition and remission of fees plus \$750.
- 5 scholarships which provide for free tuition and remission of fees.

These scholarships and fellowships are awarded on the basis of high academic achievement and are available to students in all areas of graduate study. Recipi-

ents must possess a baccalaureate degree at the beginning of the period for which the scholarship or fellowship is granted and be a candidate for a higher degree. Applications for the academic year beginning in September should be filed by the preceding March 1. Application forms may be obtained from the office of the Committee on Scholarships and Fellowships.

Teaching and Laboratory Assistantships. Many departments employ graduate students as teaching or laboratory assistants. Assistantships are awarded on the basis of scholastic accomplishment and competence for service. Remuneration is based on the time which is devoted to teaching duties. The stipends vary from \$125 to \$1800 per year, not including tuition and fees. Application forms and detailed information may be obtained by writing to the chairman of the department in which the applicant wishes to become an assistant.

Research Assistantships and Fellowships. A substantial number of research assistantships and fellowships are available at Brigham Young University. Recipients work part time under the supervision of a faculty member on research projects which are supported by University, government, or private sources. The awards vary from \$1,200 to \$2,100 per school year, depending upon the type of research and the amount of time devoted to it. Students interested in appointments to research assistantships or fellowships should direct inquiries to the director of research or to the chairman of the major department.

SUMMER SESSIONS

Graduate students who do a part of their work at the University during the summer will find a wide range of graduate courses suited to their purposes. A full quarter of work is offered in the summer school, which is divided into two terms so that students may attend only part of the summer if they desire. Graduate students may register for a maximum of nine credit hours per term.

LIBRARY FACILITIES

The Heber J. Grant Library, containing the general library and certain special collections, includes over 225,000 books, government documents, pamphlets, and bound magazines. Approximately a thousand periodicals are received regularly. Some of the outstanding collections available to students are the Boyle Collection in geology, the Gates Collection on the history, archaeology and linguistics of the Maya area, the Robert Burns Collection, and the National Welsh Library.

Special Libraries. The Albert C. Boyle Science Library, housed in the Eyring Physical Science Center, includes books and periodicals in physical science, radio, engineering, photography, and antiquities, and an extensive map collection.

The facilities of the L.D.S. Genealogical and Historical Library in Salt Lake City, which contains over 500,000 titles, are available by special arrangement, as are the collections of Utah and Mormon materials in the L.D.S. Church Library in the same city.

ADMISSION TO THE GRADUATE SCHOOL

To be admitted to the Graduate School a student must apply for admission to the University, unless he was in attendance the preceding quarter, and he also must apply for admission to the Graduate School. Normally, this must be done at least two months before the beginning of the quarter in which he plans to begin his work. Students who do not have their applications filed by this date cannot be assured that their applications will be acted upon by the time school opens. Blanks for both types of admission are obtainable from and should be filed with the office of the Graduate School. Along with the application, the student must furnish evidence of having received a bachelor's degree or its equivalent from an accredited university, and provide transcripts of all his preceding college work, if that work was taken at other universities. Students who do not

plan to work for advanced degrees need supply only one copy of a transcript of their undergraduate work, but those students who intend to work for higher degrees must supply two copies. He also must have achieved at least a "B" average in the last two academic years of undergraduate work.

Admission to the University is by registration permit issued by the University Admissions Office. Admission to the Graduate School, an additional step, which does not constitute admission on a degree-seeking basis, is completed when the student is notified by the Graduate Dean that his application for admission has been approved. It does permit the student to take any course for which he is qualified, with the understanding that this work will not apply toward a higher degree unless approved by the chairman of his advisory committee, and that he be accepted on a degree-seeking basis within the time limit prescribed for the degree for which he intends to work.

Foreign students especially are urged to correspond with the head of the department concerned to ascertain whether their preparatory work will be acceptable to the department and to the Office of Admissions, and are cautioned that adequate command of the English language is indispensable to successful graduate work.

A student whose native language is not English must include with his application for admission a statement from a responsible official that the applicant knows how to read, write, speak, and understand the English language sufficiently well to be able to pursue a satisfactory program of study in the Graduate School.

PROCEDURE FOR MASTER'S DEGREE

Preliminary to admission to degree-seeking status the applicant must present three letters of recommendation on forms provided by the Graduate School, one of which should be a character reference, and two must be from persons qualified to evaluate his academic work. These documents, together with the application and transcripts previously submitted, will be referred for evaluation to the department in which the student intends to major. The department may require additional documents, aptitude or achievement tests, or remedial course work, as a condition of admission. Such supplementary work may be taken at the University after registration for graduate study. When the student files with the dean of the Graduate School a statement from the chairman of the major department that all departmental conditions for admission have been met and that his special committee has accepted appointment, the dean will issue a statement of admission to degree-seeking status. Admission must be completed before the student registers for the last thirty hours of credit intended to apply on the degree.

PROCEDURE FOR DOCTOR OF PHILOSOPHY DEGREE

Admission to Degree-Seeking Status. A student desiring to work toward the doctorate must supply three letters of recommendation on prescribed forms, one a character reference, and two from persons qualified to evaluate his academic work. All documents relating to the student's qualifications and accomplishments will be referred to the department in which the student plans to major. The department may require additional evidence concerning the applicant's ability to pursue doctoral work, and may prescribe examinations, remedial work, or other requirements as a basis for its decision relative to the candidate's fitness for admission on a degree-seeking basis.

To be admitted on a degree-seeking basis for the doctorate, a student must have demonstrated high quality scholarship, capacity for research or creativity, broad educational interests, facility in written and oral expression, and appropriate professional objectives.

The student has the responsibility of filing with the dean of the Graduate School a statement from his advisory committee, signed by the chairman of his major department, that all departmental conditions for admission have been met and that his program of doctoral studies has been approved. Notice by the graduate dean then admits the student on a degree-seeking basis for the doctor-

ate. Such admission must be at least five quarters before the student is awarded the degree.

Comprehensive Examination. The candidate must pass a comprehensive examination on his doctoral fields under the direction of his advisory committee. This examination will normally be given at the end of the second year of study.

Admission to Candidacy. The student is admitted to candidacy for the degree by the dean of the Graduate School after the dean receives the recommendation of the advisory committee. This will normally be done after the completion of two years of graduate work. Satisfactory passing of the comprehensive examination and fulfillment of the language requirements are necessary for admission to candidacy.

GENERAL REQUIREMENTS FOR ADVANCED DEGREES

Advisory Committee. The student's program and his thesis or dissertation are developed under the direction and supervision of an advisory committee. The advisory committee for a student working toward the master's degree consists of two members, and for a student working for the doctorate consists of at least three members. These members are nominated by the student from his major and minor fields and appointed by the head of the department in which the student is to do his graduate work, with the approval of the graduate dean. The chairman of the advisory committee must always be a representative of the major field. It is the duty of this committee to advise the student in his proposed program, to approve his registration, and to direct his research and thesis or dissertation. As soon as the student's complete program is determined, which should be not later than the time he is accepted on a degree-seeking basis, each member of the advisory committee should be supplied by the student with a copy of the program and a copy must be filed by the student in the Graduate Office.

The membership of the advisory committee may be changed with the approval of all members of the newly constituted committee, the chairman of the major department, and the dean of the Graduate School. After such a change the student reviews his entire program with the new committee.

English 99. Students whose ability to write clearly and correctly is not deemed satisfactory by the department involved are required to enroll in English 99, Problems in Thesis Writing, a non-credit course. The course is equivalent to two credit hours and is regarded as part of a student's registration for that amount. It should be taken at the earliest possible time.

Student Load. A normal load is considered to be from 12 to 16 hours. Teaching assistants and others employed approximately one-half time should limit their loads to not more than 12 quarter hours, and full-time employees to not more than 5 hours. Experience has shown that because of the intensive character of graduate work and the academic grade-point average required, it is usually advisable for graduate students to limit their programs to something less than the maximum permitted when employed on a full or part-time basis.

Graduate Credit for Seniors. If during the last quarter of the senior year, a candidate for a baccalaureate degree finds it possible to complete all requirements for such a degree with a registration of fewer than sixteen quarter hours of undergraduate credit, he may register for graduate credit to the extent that the total registration shall not exceed sixteen quarter hours during the quarter. Written verification that all requirements have been met must be obtained from the appropriate undergraduate dean and presented to the dean of the Graduate School prior to such registration, but this registration does not constitute admission to the Graduate School.

Final Oral Examinations. The passing of a final oral examination not fewer than fifteen days prior to graduation is required. It is the duty of the student to schedule the final examination after obtaining from the chairman of the major department the names of the examining committee. Forms are available for this purpose.

The examination is conducted by a committee of five voting members, to be

made up of the members of the advisory committee and others appointed by the chairman of the major department. The chairman of the advisory committee is in charge of the examination. Four affirmative votes are needed to pass. Other members of the graduate faculty may attend the examination and enter the discussion, but they may not vote.

Application for Graduation. A candidate for graduation in June must submit an application for graduation and pay the graduation fee not later than the preceding January 15, and a candidate for graduation in August should normally submit his application by March 15.

Approval for Graduation. Securing approval for graduation and permission to schedule the final examination is the responsibility of the candidate. At the time of registration for courses that will complete all credit requirements for the degree, the student must file with the Graduate Office, on a form provided, a request for such approval. The final examination is not scheduled until this is done.

SPECIAL REQUIREMENTS FOR MASTER'S DEGREE

Degrees Awarded

Master of Science Degree. The Master of Science degree is awarded upon completion of the requirements listed above.

Master of Arts Degree. The Master of Arts degree is awarded upon completion of the requirements listed above, plus completion of the foreign language requirement for the Bachelor of Arts degree.

Master of Education Degree. The Master of Education degree is awarded upon completion of the requirements for a Master of Science degree, with the following exceptions: (1) a satisfactory field project (course 698) may be substituted for the thesis, and (2) a total of 45 hours of credit shall be presented in addition to the field project.

The project shall be a study of a practical problem in the field of the candidate's interest as a teacher. The problem is selected and developed by the student, subject to the approval of his advisory committee. A prospectus must be filed in the office of the Graduate School at the time of registration for the project. The finished report on the project shall conform to the requirements for a thesis in matters of style, format, and manner of filing. It is recommended that a candidate complete not less than one year as a teacher before beginning the field project.

CREDITS

Amount and Distribution of Credit. The master's degree requires the completion of 45 or more quarter hours of credit, at least 30 hours of which must be approved by the advisory committee prior to registration. At least 30 hours of graduate work must be in the 500 series or above. Courses in the 300 and 400 series may apply toward the remainder of the required credit but only if approved prior to registration by the student's advisory committee, or department chairman in cases where an advisory committee has not been appointed.

At least 23 of the hours must be in the major field and at least 15 in a minor field. At least three-fourths of all work applying on the degree, including all work in the 300 and 400 series, must be of grade "B" or better; none of the remainder may be of a grade lower than "C". At least 15 hours in the major field and 10 hours in the minor field must consist of courses for which there is a systematic body of subject matter identified with a given course number such as ordinarily constitutes a formal course or seminar. Individual readings and special problems may not be included in these totals.

Transfer Credit. Graduate work up to 15 quarter hours may be transferred from other institutions upon the approval of the student's advisory committee and the Graduate Council. Forms for petitioning for such transfers are available in the office of the Graduate School. Credit transferred must represent work

which is a fair and reasonable equivalent of corresponding work in this University. All transferred credit must be of grade "B" or better.

Conditions for the Application of Credit Toward a Master's Degree. Of the 45 hours required for the master's degree, at least 30 quarter hours of approved courses must be taken on the campus of Brigham Young University, and must be taken by the candidate after his advisory committee has been formed. No correspondence credit is applicable toward a master's degree.

Master's Thesis. The prospective candidate for the master's degree enrolls for a thesis (course 699) in his major department, preferably two quarters before the scheduled completion of his program. A student whose major is music theory, theatre and dramatic art, painting and sculpture, or design, may substitute for the thesis requirement a piece of creative work. For the various options that may be used in fulfilling the thesis requirement in the department of English, see the Graduate Catalog. At the beginning of his research or creative work the student must provide the chairman of his advisory committee with an outline or prospectus and secure approval on a form provided by the Graduate School. He is required to complete at least one full quarter of study after the date on which the form and prospectus are delivered to the Graduate Office. A complete, signed, but unbound copy of the thesis must be on file in the office of the Graduate School and with the chairman of his advisory committee fifteen days prior to the final examination and not later than thirty days before graduation. Up to six hours of credit may be recorded when the thesis is completed and accepted. Four copies of the thesis must be submitted.

Each candidate is required to furnish six abstracts of his master's thesis, one abstract to accompany each copy of the thesis and two extra copies. (A seventh copy of the abstract is required for theses in Education.) The abstract is to have a maximum length of 600 words and should be bound with the thesis, following the bibliography.

Time Limit. All requirements for the master's degree must be completed within six years from the date when the student registers for the first graduate work which is applied toward the degree.

SPECIAL REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY DEGREE

The Doctor of Philosophy degree is awarded for distinguished attainment in a recognized field of learning, not merely for the completion of courses of study. The University offers the Doctor of Philosophy degree in the fields of chemistry, geology, history, musicology, psychology, church history and philosophy, bible and modern scripture, and sociology.

Academic Requirements. The student must select a major field of study and at least one minor field approved by the department chairman and the dean of the Graduate School. Specific requirements in these fields are described by the departments.

The equivalent of at least three years of full-time study is required, at least two of which, including the last, must usually be at Brigham Young University. Full-time study is defined as at least twelve hours in course work or the equivalent in research per quarter. The advisory committee has authority to decide what work will be accepted to meet these requirements, and may accept or require up to two years of full-time study elsewhere.

Language Requirement. Before taking his comprehensive examinations, the student must present satisfactory evidence of proficiency in two foreign languages, one of which must be French or German, chosen in consultation with the advisory committee.

The language examination is administered by the Language Department in agreement with the department in which the student is majoring. The examination tests primarily reading proficiency in the student's major field. If the student is not prepared to pass examinations in both languages at entrance, on his ap-

plication for admission he must satisfy the dean that he is taking necessary steps to do so promptly.

Dissertation. The candidate is required to present an acceptable dissertation based upon his own research. Four typewritten copies must be filed in the office of the Graduate School at least fifteen days prior to the final examination. At the same time, seven copies of an approved abstract of not more than 600 words must be submitted. The student is also required either to furnish the University with fifteen reprints of his dissertation or to arrange for its microfilming.

Final Examination. Not later than fifteen days before graduation, the student must pass a final examination given by a committee of not fewer than five members. The committee consists of the advisory committee plus such other members as the dean of the Graduate School shall designate.

Departmental Requirements. A statement of special requirements for the doctorate is found in the Graduate Catalog under the name of the major department.

Time Limit. All requirements for the Doctor of Philosophy degree must be completed within nine years of the date on which the student applies for admission to degree-seeking status for that degree. In order for credit which exceeds this time limit to apply on the degree, such credit must be validated by special examination.

SPECIAL REQUIREMENTS FOR THE DOCTOR OF EDUCATION DEGREE

Admission to Degree-Seeking Status. In addition to the requirements stated elsewhere, the applicant must possess certification as a teacher, must have completed two years of practical experience in education, and must possess demonstrable acquaintance with the field of education. His competence will be ascertained by a qualifying examination covering work equivalent to thirty hours of credit. There is no special requirement as to how the student should obtain this background. The examination will be given soon after the student is admitted.

Advisement. The early advisement of the student, until he has passed the qualifying examination, will be supervised by the Graduate Committee of his college, which will assign him a specific adviser in his major field. When the student successfully passes the qualifying examination, he will be given an advisory committee of at least four members. They are to be nominated by the student to his adviser, who in turn recommends the committee membership to the Graduate Committee of the college. The Graduate Committee then forwards its recommendation to the dean of the Graduate School who grants final approval. The chairman must be in the student's major field, and there must be one member from each of his supporting fields. The chairman of the major department shall be a member *ex officio*.

Academic Requirements. The student must meet the departmental requirements of his chosen major field and the requirements established within his department and college in three supporting fields. He will be required to complete the equivalent of at least three years of full-time study, of which one must consist of three consecutive quarters on the campus of the University. He must take one three-hour seminar during each of these quarters. Work accepted from another institution must be approved by the advisory committee and the Graduate Council.

The candidate must demonstrate proficiency in statistics to the satisfaction of the advisory committee.

Field Project and Report. A field project for the improvement of a program of administration or instruction must be carried out under the direction of the student's advisory committee, after he has passed the comprehensive examination. The report of the field study must meet the same standards of format as the Ph.D. dissertation, and be submitted under the same schedule and requirements regarding publication.

Comprehensive Examination and Admission to Candidacy. A comprehensive examination on the formal academic work will be given after completion of about

two full years of study. The student will be recommended to the dean of the Graduate School for admission to candidacy when he passes this examination.

Final Examination. Not later than 15 days before graduation, the student must pass a final examination on the field project and related matters. The examining committee will consist of his advisory committee, and such others as the department chairman and dean of the Graduate School may designate.

Time Limit. All work for the degree must be completed within nine years of the date on which the student applies for admission to degree-seeking status for that degree. In order for credit which exceeds this time limit to apply on the degree, such credit must be validated by special examination.

School of Nursing

L. Bernice Chapman, Director (2240 FLC)

The basic collegiate program in nursing prepares young men and women to become professional nurses able to fill beginning positions in all the clinical areas of nursing: maternal and child care, medical-surgical nursing, public health nursing, psychiatric nursing, etc. It is expected that these nurses can function productively to contribute to comprehensive patient care, to the prevention of illness, and to the promotion of health through working with patients and with professional and community groups. The program also endeavors to support growth of the individual so that he or she may enjoy a satisfying and useful personal, family, and community life.

The program leads to a Bachelor of Science degree. All instructors are full-time University faculty members and have general and professional educational backgrounds consistent with the academic rank they hold. The School of Nursing is accredited by the National League for Nursing Accrediting Service and is approved by the Representative Committee for the Practice of Nursing in Utah.

Admission Requirement

All applicants must meet University admission requirements. Prospective students are also advised to take three and preferably four units of English, one unit of algebra (a unit of geometry is desirable), and a unit of chemistry and/or a unit of biology, preferably both.

A student may register in the School of Nursing in the first quarter or may enroll in one of the prescribed courses for general registration and then transfer to the School of Nursing. Students considering nursing as a major should consult the School of Nursing as early as possible. Personal interviews with a faculty member and completion of special forms are required during the first year at the University.

Eligibility for continued registration in the School of Nursing will be determined by health records, adaptability to nursing as evidenced by attitudes and skills, and university grades. The grade average requirements are as follows:

- a. First quarter freshman students must make a 1.75 grade average.
- b. Second and third quarter freshmen must make a 2.00 grade average. Students making a 1.75 to 2.00 average in either the second or third quarter may continue their registration on probation.
- c. The cumulative grade average for freshman students at the end of three quarters must be 2.00. Students making a 1.90 to 2.00 average may continue registration on probationary status during their fourth quarter.

An average grade of "C" must be maintained each quarter.

Educational Facilities

Students use the same facilities and have the same cultural opportunities as all other students on the campus. The newest and most effective teaching aids and equipment are provided in the School of Nursing laboratories and classrooms. The facilities utilized for nursing experience change from year to year depending upon the needs of the students and the learning experiences selected by the faculty. At present, clinical experience is provided in the Latter-day Saints Hospital in Salt Lake City, the Primary Children's Hospital in Salt Lake City, the Utah Valley Hospital of the Church of Jesus Christ of Latter-day Saints in Provo, Utah State Hospital, Utah City-County Health Department, Salt Lake City Health Department, and other civil agencies. The hospitals are approved by the Joint Accreditation Committee of the American Hospital Association, the American College of Surgeons, and the American Medical Association.

The Latter-day Saints Hospital has a capacity of 347 adult beds and 86 bassinets. It provides clinical fields for the practice of medical, surgical, operating room, obstetric, and pediatric nursing.

The Primary Children's Hospital in Salt Lake City, with a bed capacity of 100 including an isolation unit of 12 beds, provides experience in the care of the child.

The Utah Valley Hospital of the Church of Jesus Christ of Latter-day Saints has a current capacity of 115 beds and 35 bassinets. At the present time these facilities are used for the practice of beginning nursing skills.

Utah State Hospital is used for experience in psychiatric nursing.

The Utah City-County Health Department and the Salt Lake City Health Department provide a generalized public health nursing program and offer field experience to students in nursing.

FEES

Total educational costs including board, room, and uniforms are borne by the student. See section titled "University Fees" for a listing of general University expenses. An itemized estimate of the costs for a student in the School of Nursing is available upon request.

Curriculum

The curriculum of the School of Nursing is organized to provide a balance of general and professional education. General education courses which partially fulfill University requirements are given in the first three quarters. In the second year, courses in professional nursing are correlated with general education. Nursing courses predominate in the last two years.

The course of instruction covers four academic years plus two summer quarters. Clinical practice is a closely supervised laboratory experience with theory courses given concurrently. Courses which help to develop communication skills, social and civic responsibilities, and understanding of human behavior are provided throughout the nursing program.

Students must meet both nursing and general education requirements for graduation.

Division of Religion

The President of the University is the Head of the Division of Religion.

Sidney B. Sperry, Director of Graduate Studies (122 S).

Chauncey C. Riddle, Assistant Director of Graduate Studies (218 S).

David H. Yarn, Jr., Director of Undergraduate Studies (112 S).

The following departments are in the Division of Religion:

Bible and Modern Scripture
Church History
L.D.S. Church Organization and Administration
Theology and Philosophy

The Division of Religion administers all religious instruction and is responsible for the program of religious activities which is sponsored by the University. Through its departments every student in the University is given the opportunity to benefit from religious instruction.

Students in any college of the University who complete thirty-four quarter hours of religious instruction, which must include at least four hours in each of the above-named departments of the Division of Religion, will receive special recognition for such achievement at the time of their graduation, providing they make application to the Director of the Division of Religion four weeks prior to graduation.

It has always been the view of the Church of Jesus Christ of Latter-day Saints that in the training of its youth there should be a proper integration of moral and religious values with secular knowledge. From its inception Brigham Young University, firm in the belief that no life is full and complete unless established upon a sound ethical and religious basis, has offered courses in religion.

Brigham Young University is the University for the Church of Jesus Christ of Latter-day Saints. One of its important aims is to develop its students spiritually as well as scholastically, to enable them to live more rounded and complete lives. The faculty of this institution, therefore, are active members and leaders of the Church, many of whom have a deep spiritual insight and a desire to instill this insight into the students with whom they come in contact.

8 have served or are now serving as mission presidents.

55 have served or are now serving in general auxiliary boards of the Church.

41 have served or are now serving in stake presidencies.

148 have served or are now serving in ward bishoprics.

97 have served or are now serving in high councils.

342 have served in various other auxiliary, teaching, and priesthood capacities in the Church and 289 are now teaching in auxiliary organizations or priesthood quorums.

170 have served or are now on leave serving on foreign missions.

All of the officers of the Air Reserve Officer Training Corps are active members of the Church. Three are now serving as members of bishoprics. Eight have been on missions, and 16 are now actively engaged in administrative and teaching positions in Church auxiliary organizations.

List of Courses

General

New Course Numbering System. Effective with the 1957-58 catalog the following course numbering system was initiated by all departments of the University:

Course Number	Type of Course
1 to 99	Preparatory and remedial (non-credit)
100 to 299	Lower Division
300 to 499	Upper division
500 to 599	Advanced undergraduate or graduate
600 to 799	Graduate

This system replaces the numbering system used heretofore: 1 to 99, remedial and lower division; 100 to 199, upper division including advanced undergraduate and graduate; 200 to 299, graduate.

To minimize confusion during the period of changeover, the old course number is listed in parentheses after the new number in departmental course listings. This is, with one exception, the only place in the catalog where old numbers appear. In all areas except the course listings and the College of Education Section of this catalog, new numbers are used exclusively.

Credit Hour Designation. A second change in course listing is the use following the course title of a three-number designation (5:5:0) for credit hours rather than the one-number designation (5) previously used. The three-number code has the following significance:

First number:	Quarter hours of credit
Second number:	Class hours of lecture, recitation, or seminar meeting per week or Minimum hours of individual study required per week
Third number:	Laboratory hours required per week or Hours of field study or individual research per week

Cross Referencing of Courses. Yet another change is in the cross referencing of courses. Each course will be listed completely only once in the catalog. If the course may count in another department, it will appear in a special grouping at the end of the course listing for that department.

Inter-departmental Courses. In Family Living, Humanities, and Physical Science inter-departmental courses are taught. In the course listing which follows, these courses appear under the appropriate headings of Family Living, Humanities, and Physical Science rather than in a specific department.

Graduate Courses. For regulations governing study beyond the bachelor's degree, see the Graduate School section of this catalog and the Graduate Catalog. Advanced undergraduate or graduate courses (500 series) may be used for graduate credit with certain limitations.

Reservation of Right to Change Courses. At the time of printing of this catalog, the University intends to give the courses listed herein, but reserves the right to eliminate or discontinue any of them or to add new courses.

Courses

Accounting
 Agricultural Economics
 Agronomy
 Air Science
 Animal Husbandry
 Archaeology
 Art
 Bacteriology
 Botany
 Business Education and Office Management
 Business Management
 Chemical Engineering Science
 Chemistry
 Civil Engineering Science
 Clothing and Textiles
 Economics
 Economics and Management of the Home
 Education: Instruction
 Educational Administration
 Educational Philosophy and Programs
 Educational Research and Services
 Electrical Engineering Science
 English
 Family Living, General
 Food and Nutrition
 Geography
 Geology and Geological Engineering Science
 Health Education
 History
 Homemaking Education
 Horticulture and Horticultural Specialties
 Housing and Design
 Human Development and Family Relationships
 Humanities
 Industrial Arts and Drawing
 Journalism
 Languages
 Library Science
 Mathematics
 Mechanical Engineering Science
 Music
 Nursing
 Physical Education
 Physical Science
 Physics
 Political Science
 Psychology
 Recreation
 Religion
 Sociology
 Speech and Dramatic Arts
 Youth Leadership
 Zoology and Entomology

Accounting

Professors: H. V. Andersen (chairman, 181 N), R. J. Smith.

Associate Professor: J. T. Bentley*.

Assistant Professors: E. A. Johnson, McIff.

Instructors: Brough, A. P. Johnson*, J. M. Smith, Squire, White.

Although the profession of accounting is relatively young, it is growing rapidly and offers unlimited opportunities for professional recognition, financial reward, and public service.

A broad variety of careers is open to the trained accountant. He may practice the profession of public accounting, take a salaried position as the accountant or financial officer of a business organization, engage in a government service as an accountant, or enter the teaching profession. It is a basic tool of every person who engages in business activity.

In addition to the regular four-year program leading to a bachelor's degree, a five-year program leading to a master's degree and especially designed to prepare the student for the C.P.A. examination is now offered.

Suggested Program for Accounting Majors

The courses listed below include both the University and the departmental requirements.

	Fr.-So.	Jr.	Sr.	Gr.
General Education				
*Religion	12	6	6	
*Physical Science	5	4		
*Biological Science	8			
*English 111, 112, 113	9			
*Social Science (Incl. Hist. 170)	10			
*Physical Education and Health	5			
*Humanities	15			
General Business and Tool Courses				
Mathematics 111	5			
*Economics 101	5			
*Economics 331	5			
*Business Management 347		5		
*Business Management 348		5		
*Economics 345		5		
*Business Management 340		5		
Other Electives	10	2	7	18
Accounting				
*Elementary 201, 202	10			
*Business Math 230, 231	6			
*Cost 285	5			
*Machine Accounting 316		2		
Advanced Business Math 332			3	
*Intermediate 350, 351, 352		15		
Taxes 450			5	
*Business Law 459			5	
Theory of Accounts 545			5	
Systems 555			5	
Computer Programming 556			5	
Auditing 565			5	
Advanced 570			5	

Advanced Taxes 582				3	
C.P.A. Coaching 586, 587, 588					12
Internship 596					6
Thesis 699					6
Totals	110	54	54		39

***Required courses.**

Note: Those expecting to go into private or industrial accounting should consider Drawing 102, Blueprint Reading, and Accounting 584, Advanced Cost Accounting.

Those planning to go into controllership accounting should take Business Management 588, 598, Problems in Business Management.

Lower Division Courses

- 101 (1). Elementary Accounting. (5:5:0) A.W.S. Staff**
An introductory course for freshman students who have had neither training nor experience in accounting or Mathematics 101 or its equivalent.
- 102 (2). Elementary Accounting. (5:5:0) A.W.S. Staff**
Continuation of Accounting 101.
- 201 (New). Elementary Accounting. (5:5:0) A.W.S. Prerequisite: High School bookkeeping or Mathematics 101 or its equivalent. Staff**
An introductory course designed for the student whose major field demands a more rigorous course than Accounting 101.
- 202 (New). Elementary Accounting. (5:5:0) A.W.S. Prerequisite: Accounting 201 or 101 and special permission. Staff**
A continuation of Accounting 201. Required for accounting majors.
- 230 (35). Mathematics of Business. (5:5:0) A.W.S. Prerequisite: Mathematics 101 or equivalent.**
Application of mathematics to business; includes ratio and proportion, index numbers, markup pricing, discounts, simple and compound interest, annuities, amortization, sinking funds, bond valuation and depreciation.
- 231 (New). Mathematics of Business. (3:3:0) A.W.S. Prerequisite: Accounting 230.**
Continuation of Accounting 230.
- 285 (85). Cost Accounting. (5:5:0) A.W.S.Su. Prerequisite: Accounting 202. A. Johnson**
An introduction to the principles and practices of cost accounting.

Upper Division Courses

- 316 (125). Machine Accounting. (2:2:1) A.W.S.Su. Prerequisite: Accounting 101 or 201. Staff**
Accounting procedures and analyses involving the use of electronic equipment and its application to payroll, inventories, financial statements, sales purchases and other accounting information.
- 332 (New). Advanced Mathematics of Business. (3:3:0) W.S. Prerequisite: Accounting 231. Recommended: Economics 331. Staff**
Application of mathematical techniques to electronic data processing, linear programming, operations research and economics research.
- 350, 351, 352 (150, 151, 152). Intermediate Accounting. (5:5:0 ea.) A.W.S. Prerequisites: Accounting 202 or 102 and special permission. Staff**
This course is designed to meet the requirements of two groups: (1) general business students primarily concerned with the interpretation and use

of the products of accounting and for whom this course may be the final formal study in this field, and (2) students who have chosen accounting as a career and for whom the intermediate course must provide a broad foundation for the specialized studies to follow.

- 440 (187). Municipal and Government Accounting.** (3:3:0) S.Su. Prerequisite: Accounting 351. Staff
Operation and auditing of municipal and government accounts.
- 450 (188). Federal and State Taxes.** (5:5:0) A.W.Su. Prerequisites: Accounting 102 or 202 and preferably 350 or Business Management 332. Staff
A study of federal and state tax legislation and regulations with emphasis on individual income tax.
- 459 (F. & B. 157, 158, 159). Advanced Business Law.** (5:5:0) W.S. Prerequisite: Business Management 342. Andersen
Business law for accountants and businessmen with emphasis on the laws governing finance, real and personal property, employer-employee relationship, government regulation of business, wills, bankruptcy, estates and trusts.

Advanced Undergraduate or Graduate Courses

- 545 (175). Theory of Accounts and Statements.** (5:5:0) W. Staff
A brief study of the history and development of accounting and financial statements, their meaning and interpretation. Current accounting problems will be reviewed.
- 555 (185). Accounting Systems, Procedures and Methods.** (5:5:0) W. Prerequisites: Accounting 102 or 202; 316; B.E.O.M. 106. Staff
Selection and design of accounting systems and procedures. Preparation of the accounting manual, financial reports, and statements.
- 556 (New). Electronic Computer Programming.** (5:5:0) S. Prerequisite: Accounting 230 or equivalent. Staff
Basic computer logic, binary notation, operational coding, flow charting, iterative routines, subroutines, library programs, optimum coding, symbolic coding, and data processing application.
- 565 (194). Auditing and Professional Ethics.** (5:5:0) A.W.Su. Prerequisite: Accounting 352. Staff
Principles and methods of public accounting, professional responsibility and conduct, techniques of verification of accounts and financial statements, audit of working papers.
- 570 (280). Advanced Accounting.** (5:5:0) A.Su. Prerequisite: Accounting 352. Staff
- 571, 572 (281, 282). Industrial Internal Auditing.** (3:3:0 ea.) W.S. Not offered this year. Prerequisites: Accounting 352, 565 or equivalent. Staff
- 582 (288). Advanced Tax Problems.** (3:3:0) S. Prerequisite: Accounting 450. Andersen, Johnson, Smith
- 584 (294). Advanced Cost Accounting.** (3:3:0) S. Staff
- 586, 587, 588 (296, 297, 298). C.P.A. Coaching.** (4:1:0 ea.) A.W.S. Prerequisites: Accounting 285, 352, 565, and the following, which should be taken before or with C.P.A. Coaching: Accounting 440, 450, 570. Staff
Evening sessions.
- 593 (293). Reading and Conference.** (1-5:1-5:0) A.W.S.Su. Subject to be arranged with instructor. Staff
- 596 (196). Accounting Internship.** (3:0:40) Staff

Graduate Courses**699 (300). Thesis for Master's Degree. (Arr.)****Staff****These courses also count in Accounting:****Business Education and Office Management 106. Calculating Machines. (2:5:0)****Business Management 588, 589. Problems in Business Management. (4:4:0 ea.)****Advertising****(See courses in Journalism and Business Management)**

Agricultural Economics

Associate Professors: Nelson (chairman, 172 B), Corbridge.

The Department of Agricultural Economics emphasizes the business and economic aspects of agriculture. A wide range of electives permits a student in this department to choose course work from many different areas. The student should adapt his study program to his particular interest and needs.

The Department attempts to serve students primarily concerned with (1) farming as a career, (2) training for employment with business devoted to the production and distribution of agricultural products, (3) business and governmental institutions rendering services to agriculture, and (4) training for careers in research and teaching.

Thirty hours, including Agricultural Economics 101, 123, 125, 230, 310, 350, and 425, are required for a major in agricultural economics.

It is recommended that students training for professional employment take Economics 345. Also, students working toward graduate degrees are encouraged to take Economics 586. Credit for Economics 345 and 586 will apply toward major credit.

Agricultural economics majors are encouraged to take several classes in each of the other agricultural departments. At least two courses are required from each of the following areas:

Agronomy 141, 251
 Animal Husbandry 101, 161, 170, 207
 Horticulture 101, 102, 103

In addition, students returning to the farm should take at least two courses in industrial arts.

Lower Division Courses

- 101 (New). Economics and Agriculture.** (5:5:0) A.S. (G-SS) Corbridge, Nelson
 Basic general education course in economics covering the same theoretical framework as in Economics 101, but with special reference to the agricultural sector of the economy.
- 123 (23). Farm Accounting.** (3:3:0) A.W. Corbridge
 Elementary study of basic records needed for income tax computation and effective farm management, their compilation, interpretation, and use.
- 125 (25). Farm Management.** (3:3:0) A.S. Corbridge
 A general consideration of farm management, with special reference to land-use programs, livestock systems, power, labor, and machinery inputs, farmstead planning, farm records, and finance.

Upper Division Courses

- 310 (110). Marketing Farm Products.** (3:3:0) A. Nelson
 Economic principles, marketing agencies, methods of selling, channels of distribution, market information, current research, and regulations affecting major farm products.
- 320 (168). Agricultural Cooperatives.** (3:3:0) S. Nelson
 Organization, financing, management, price policy, membership and public relations; factors affecting the success of cooperative associations.

- 325 (140). **Advanced Farm Management.** (5:5:0) W. Prerequisites: Economics 101, Agricultural Economics 125, or special permission of the instructor. Corbridge
 Practical application of principles of production economics, combination of productive resources, measures of efficiency, farm accounts, financing, contracts, and other factors affecting success.
- 350 (191). **Western Land and Range Problems.** (3:3:0) W. Nelson
 Land and range requirements. Economics of land use, evaluation, and conservation of basic resources. Social and economic problems related to credit, taxation, land ownership, range management, reclamation projects and irrigation developments.
- 360 (152). **Law and the Farmer.** (3:3:0) S. Staff
 A study of legal problems with which the farmer is most often concerned in the operation of the farming enterprise.
- 410 (169). **Marketing Livestock Products.** (3:3:0) W. Nelson
 A study of existing marketing channels and methods of handling livestock products including poultry, dairy and meat animals and their products.
- 425 (192). **Farm Appraisal and Finance.** (3:3:0) S. Corbridge
 Training in farm appraisal for purposes of purchase, finance and taxing. Also an evaluation of the principal sources of farm finance.
- 430 (New). **Introduction to Statistics.** (3:2:1) A. Nielson
 A terminal course intended for the undergraduate student who desires only a cursory view of the field of statistics.
- 490, 491 (280, 281). **Seminar.** (1:1:0 ea.) A.W. Staff

Advanced Undergraduate or Graduate Courses

- 530 (New). **Intermediate Statistics.** (3:2:1) W. Prerequisite: Agricultural Economics 430. Staff
 Statistical methods.
- 531 (New). **Advanced Statistics.** (3:2:1) S. Prerequisite: Agricultural Economics 530. Staff
 Statistical methods.
- 570 (194). **Agricultural Prices.** (3:3:0) W. Nelson
 Pricing principles, relation of prices of agricultural and non-agricultural products, prices and commodity surpluses, cash and future prices, price forecasting and outlook, analysis of price variations for farm products.
- 580 (195). **Agricultural Policy.** (3:3:0) A. Corbridge
 The theoretical and institutional setting of the agricultural industry, the objectives of farm policy, and the means of achieving these objectives. Includes a study of existing and proposed farm legislation.
- 590, 591 (280, 281). **Seminar.** (1:1:0 ea.) A.W. Staff
- 595 (296). **Individual Readings.** (Arr.) Staff
- 597 (297). **Individual Research.** (Arr.) Staff

Graduate Courses

- 699 (300). **Thesis for Master's Degree.** (Arr.) Staff

Agronomy

Professors: Farnsworth, Martin (emeritus).

Associate Professors: Hallam (chairman, 160 B), Allred, Ashton.

The Department of Agronomy includes work in crops and soils. Students majoring in the field may be trained in the following areas: (1) practical scientific farming, (2) government civil service, (3) commercial agricultural positions, (4) graduate study toward the M.S. or Ph.D. degree, (5) agricultural teaching when program is planned in that direction.

Students registered or majoring in any of the agricultural departments (except those planning to do graduate work toward a Ph.D. degree) are required to take at least two courses from each of the following areas:

Agricultural Economics 123, 125, 310

Animal Husbandry 101, 161, 170, 207

Horticulture 101, 102, 103

In addition, students returning to the farm should take at least two courses in industrial arts.

All majors in agronomy are required to take one year of chemistry.

The following courses are recommended for all agronomy majors:

Mathematics 101 or 111 and 112 or 135

Chemistry 105, 106, and 107, or 111, 112, and 113

Botany 101 or Zoology 105, and Botany 410

Bacteriology 121

Geology 111

Students majoring in agronomy may direct their training toward either crops or soils. Those desiring crops training are required to take the following:

Agronomy 141, 251, 260, 262, 305, 455 or 573.

Those desiring most of their training in soils are required to take the following:

Agronomy 141, 251, 302, 305, 307.

A minimum of 30 hours is required for a major in either case. Hours above those required may be taken from any of the courses listed under the Agronomy Department offering.

Following is a recommended sequence of courses:

Freshman Year

	A	W	S
English 111, 112, 113	3	3	3
Phys. Ed.	1	1	1
Math. 101, 111, or 112	5	5	
Chemistry 105, 106, 107, or 111, 112, 113	5	5	5
Religion	2	2	2
Botany 101			5
Electives	2	2	2
Total hours	18	18	18

Sophomore Year

	A	W	S
Agron. 141, 251	4	4	
Bact. 121			4
Chemistry 221	5		
Religion	2	2	2
Social Science	5		5
English		3	
Geology		5	
Electives	2	4	7
Total hours	18	18	18

Junior Year				Senior Year			
	A	W	S		A	W	S
Agron. 451, 455.....	3		3	Agron. 305, 506, 314	5	3	5
Agron. 302, 307		4	3	Agron. 496	1	1	1
Religion (Upper Division)	2	2	2	Botany 410		5	
Electives	13	12	10	Religion (Upper Division) ..	2	2	2
	—	—	—	Electives	10	7	10
Total hours	18	18	18	Total hours	18	18	18

1. In planning a program for returning to the farm, the student should take as many courses as possible in the following areas depending upon his needs, desires, and the requirements of his minor field:

Animal Husbandry 335, 360, 370, 427.

Botany 451, 470.

Industrial Arts 103, 120, 125, 150, 308, 365, 401, 405, 407.

Agricultural economics, agronomy, and horticulture as listed in catalog.

2. Should a student desire to enter the field of government civil service as an agronomist, soil conservationist, soil scientist, or reclamationist, his general courses will be as listed above with electives from the following:

Animal Husbandry 335, 360, 370, 427.

Agricultural economics, agronomy, and horticulture as listed in catalog.

Botany 123, 410, 430

Chemistry 220 or 221.

Drawing 102.

Geology 111, 112.

Mathematics 112, 231.

3. For training for commercial positions, a combination of the above courses is suggested.

4. The suggested course of study for agronomy majors who plan to do graduate work for a Ph.D. degree in soils is as follows:

	Hours
Agronomy 141, 251, 301, 302, 305, 307, 314, 496, 503	30-32
Bacteriology 121	4
Botany 101 or Zoology 105	5
Botany 410, 430, 470	5
Chemistry 111, 112, 113, 221, 351, 352, 353, or 461, 462, 463	32-35
Geology 111	5
German 101, 102, 103	15
Mathematics 111, 112, 231, 232, 233, 234	30
Physics 211, 212, 213	15

Lower Division Courses

- 141 (41). General Soils. (4:2:4) A.S.** Martin
An introductory course dealing with the physical, chemical, and microbiological properties of soils.
- 251 (51). Principles of Field Crop Production. (4:3:2) A.W.** Allred
Crop production principles, soil-plant relationships, crop improvement, tillage and crop rotations. May be taken concurrently with Agronomy 260, 261.
- 260 (60). Cereal Crops. (2:2:0) A.** 1958 and alternate years. Prerequisite: Agronomy 251. Allred
Classification, history and cultural methods involved in the production of cereal crops.

- 261 (61). Root and Special Crops.** (2:2:0) W. Not offered this year. Prerequisite: Agronomy 251. Allred
Cultural methods, market types, and commercial possibilities of sugar beets, potatoes, etc.
- 262 (62). Forage Crops.** (4:3:2) Su. Prerequisite Agronomy 251. Allred
Alfalfa, clovers, grasses, and other forage; meadow and pasture management; silage and soiling crops.

Upper Division Courses

- 301 (101). Soil Physics.** (3:3:2) A. Prerequisites: Agronomy 141, Chemistry 105 or 111, Mathematics 101 or 111. Recommended: Physics 211, 212, 213; Chemistry 112, 113, 220 or 221. Farnsworth
Physical composition of soils—sand, silt, clay, and organic matter—and their effects upon the air, water, and temperature relationships in the soil.
- 302 (102). Irrigation and Drainage.** (4:3:2) W. Prerequisites: Agronomy 141, Mathematics 111. Farnsworth
Proper use of irrigation water; irrigation water supply; water measurements; drainage in relation to the irrigation practices; drainage and alkali; drainage systems.
- 305 (105). Soil Fertility.** (5:3:4) A. Prerequisites: Agronomy 141, Chemistry 105 or 111. Hallam
A study of the underlying principles of soil fertility, soil alkali, soil chemical analysis or soil testing, commercial fertilizers, farm manures, green manures, crop rotations.
- 307 (107). Soil Origin, Classification, Conservation, and Survey.** (3:2:3) S. Prerequisites: Agronomy 141, Geology 101. Farnsworth
The influence of geologic forces and climate environment on soil development; classification of soils based upon soil profile characteristics. Methods of soil conservation and soil survey are emphasized.
- 314 (114). Soil Microbiology.** (3:3:0) S. Prerequisite: Bacteriology 121. Hallam
Designed to acquaint the student with bacteria in relation to soil fertility; the activity and types of organisms in the rhizosphere; the biological processes in the soil.
- 315 (115). Soil Microbiology Laboratory.** (2:0:4) S. Prerequisites: Agronomy 314, Chemistry 221, or equivalent, or consent of instructor. Hallam
Designed to accompany soil microbiology lectures.
- 451 (151). Principles of Weed Control.** (3:3:0) S. Prerequisites: Agronomy 141, 251. Allred
Cultural, chemical, and biological methods of weed control with emphasis on translocated chemicals, soil sterilants and contact chemicals.
- 453 (153). Advanced Field Crops and Seed Production.** (3:3:0) W. Prerequisites: Agronomy 141, 251, 260, 262. Allred
Problems involved in crop production, crop judging, and seed certification.
- 455 (155). Pasture Management.** (3:3:0) S. Prerequisites: Agronomy 141, 262, and Botany 101. Recommended: Chemistry 105, 106, and 107 or equivalent; Agronomy 305, and Botany 410. Allred
Analysis of the conditions of pastures in intermountain region, need for improvement, factors involved in improvement; principles and practices of management required to provide maximum production for dairy, beef, sheep, hogs and poultry.
- 457 (157). Identification and Ecology of Weeds and Crops.** (3:3:0) Su. Allred
Field study of important grasses, legumes, other agronomic crops, and weeds; adaptation to soil, moisture, light, and other environmental conditions; growth characteristics, utilization, and control.

- 459 (159). Plant Breeding. (3:3:0) S. Prerequisites: Botany 101 and Zoology 176. Ashton
Methods of hybridizing and selection in relation to plant improvements.
- 496 (196). Seminar. (1:1:0) A.W.S. Staff
Current agronomic literature, agricultural problems. Required of all senior students majoring in agronomy.
- 497 (197). Research and Special Problems. (1-3:1-3:0) A.W.S.Su. Seniors specializing in agronomy elect research work from one to three hours. Staff
- 498 (198). Agricultural Literature. (1-5:1-5:0) A.W.S. Staff

Advanced Undergraduate or Graduate Courses

- 503 (103). Soil Chemistry. (3:3:0) W. Prerequisites: Chemistry 221 or consent of instructor. Hallam
A physico-chemical study of soil colloids.
- 506 (106). Soil and Plant Analysis. (3:0:6) W. Prerequisites: Agronomy 305, Chemistry 220 or 221. Hallam
Laboratory chemical analysis of soils and plant materials; use of radioactive materials in soil fertility research; use, care and measurement of radioactive materials.
- 573 (173). Range Management. (4:3:2) S. Prerequisites: Botany 101, 430. Staff
Problems associated with the management of range lands, grazing, re-vegetation, and maintenance of range lands.

Graduate Courses

- 601 (201). Advanced Soil Physics. (4:3:3) W. Farnsworth
- 605 (205). Chemistry of Soil-Plant Relationships. (4:4:0) A. Hallam
- 614 (214). Advanced Soil Microbiology. (3:3:0) S. Prerequisites: Agronomy 305, Bacteriology 121. Hallam
- 615 (215). Soil Microbiology Laboratory. (2:0:4) S. Prerequisites: Agronomy 614, Chemistry 221 or equivalent. Accompanies microbiology lectures. Hallam
- 659 (259). Advanced Plant Breeding. (3:2:2) A. Not given this year. Allred
- 673 (273). Advanced Range Management. (1-4:1-3:1-2) A.W.S. Staff
- 694 (294). Seminar. (1:1:0) A.W.S. Staff
- 695 (295). Special Problems. (Arr.) A.W.S. Staff
- 697 (297). Research. (Arr.) A.W.S.Su. Staff
- 698 (299). Agricultural Literature. (Arr.) A.W.S. Staff
- 699 (300). Thesis for Master's Degree. (Arr.) Staff

This course also counts in Agronomy:

Horticulture 458. Weeds and Seed Analysis. (2:0:4)

Air Science

Professor: Col. Allen (chairman, 145 HC).

Assistant Professors: Major Hall, Captain Dye, Captain Huish, First Lieutenant McGuire.

Instructors: M/Sgt. Hancock, S/Sgt. Hall, S/Sgt. Willden.

The AFROTC Program. The AFROTC program is a four-year program designed to fit into the regular academic schedule at B.Y.U. The program consists of thirty credit hours of academic work which count toward graduation requirements, one hour of leadership laboratory per week, and attendance at a four-week summer training course between the junior and senior years at a designated Air Force base. Upon successful completion of the program and the university requirements for a baccalaureate degree, the student is qualified to receive a Second Lieutenant's commission in the United States Air Force Reserve.

Leadership Laboratory. The Leadership Laboratory is designed to give the cadet direct experience in the handling of men during his progress through the program. He learns leadership techniques and increases his self-confidence. He is promoted through the lower airmen grades in his basic years as his leadership ability is demonstrated. During his sophomore year his eligibility for enrollment in the advanced program is determined. During his junior year, the cadet holds non-commissioned officer grades, and after completing the summer training course he is promoted to a cadet commissioned officer in his senior year and given responsibilities in the leadership training of other cadets. The Leadership Laboratory is planned and operated by the advanced cadets under minimum supervision of a faculty adviser. The cadet is required to wear his uniform during the day he attends Leadership Laboratory. Leadership Laboratory is held once each week, normally on Monday afternoon.

Summer Training. The four-week summer training course is a supplement to the academic program and is designed to promote increased enthusiasm and interest in the Air Force. This summer training course also emphasizes flying for those physically qualified. It also develops in the cadet a better understanding of the mission of the USAF and the operations of an Air Force base and increases his proficiency in essential areas of junior officer training.

General Information. Approximately eighty percent of the Second Lieutenants in the United States Air Force are graduates of the AFROTC program. There are no marriage restrictions for AFROTC men either while at B.Y.U. or while on active duty. A married Second Lieutenant on flying status receives \$455.68 per month. AFROTC training does not make a specialist out of the student, but it does train him as a junior executive. During the program he will have applied his military knowledge to practical situations by staff studies, oral presentations, student instruction, and group discussions. He will have learned sound leadership techniques to prepare him to serve as a commissioned officer in the United States Air Force as well as a leader in civic and community affairs.

Enrollment. A student may enroll in the AFROTC program at only one time: during his first quarter at B.Y.U. He may leave the program at any time he desires. Transfer students from institutions where an ROTC program was offered are not eligible unless they were enrolled in ROTC at their first institution. Students transferring from institutions where ROTC was not offered are eligible only if they have four years of academic requirements to complete for graduation. See paragraph entitled *Veterans* for the only exceptions to the above. A graduate student is ineligible for AFROTC. The program must be completed concurrent with or before graduation. If it is completed before graduation, the student must graduate within one year, during which time he will continue to be deferred from the draft.

Eligibility. The beginning student must be a citizen of the United States and

be between the ages of 14 and 23. He must meet certain physical standards prescribed by Air Force and be enrolled as a regular day-student at B.Y.U. Unless he is a veteran he must have twelve quarters of academic study to complete for graduation requirements. To be accepted in the advanced program, the cadet must have completed his basic courses with at least a "C" average. In addition he must pass a written examination for Air Force officer qualification, pass a thorough physical examination, and be selected by a board of officers appointed by the Professor of Air Science and approved by the President of the University. The applicant for the advanced program must also execute a written contract with the Government under which he agrees to complete the advanced course, attend the prescribed summer training, and serve his tour of active duty with the Air Force upon completion of the AFROTC program.

The Draft. All able-bodied men in the nation are presently required to fulfill a six- or an eight-year military obligation if called into the service. This requirement, established by the 84th Congress as Public Law 305, must be accomplished through a combination of active and reserve duty depending upon the selection made by the individual concerned. Enrollment in AFROTC is not credited toward this military obligation. Cadets who are properly enrolled in the AFROTC program may be deferred from the draft after they satisfactorily complete one quarter of Air Science, continue in the program, and are within the yearly quota allotted to the University for graduation.

Veterans. A veteran enrolling at this institution with prior college credit who seeks a commission through the AFROTC program may have that part of the basic program waived (maximum both freshman and sophomore years) which corresponds with the academic credit on his record. A veteran must have at least six quarters of academic requirements to complete for graduation to be eligible for AFROTC. He must enroll during his first quarter at B.Y.U. or make arrangements with the Department of Air Science for an appropriate delay to place him in phase. He may not attend school for one year or even one quarter and then decide to enter the program. A veteran without prior college credit must register for the basic course and follow through the entire program.

Nine hours of military science credit, one hour of health and three hours of physical education are allowed veterans enrolling at B.Y.U.

Extracurricular Activities. AFROTC cadets normally extend their academic and laboratory associations into extracurricular activities. These include the Saber Air Command for basic cadets, the Arnold Air Society for advanced cadets, the Drill Team, the AFROTC Chorus, the AFROTC Band, the Rifle Team for all cadets, and the annual Military Ball. Cadet associations and friendships formed during the program have many carry-over values after college.

Orientation Flights. A comprehensive program of orientation flights in United States Air Force aircraft is carried on during each school year. Each cadet has the opportunity of visiting Air Force bases and aircraft assembly plants. These flights, as well as those carried on in jet aircraft at summer training, are conducted by experienced Air Force pilots at no charge to the cadet. On overnight cross-country flights, cadets pay for their own meals and are charged a minimum housing fee when billeted at government installations. Cadets are also responsible for their own expenses when unpredictable delays occur and when housing is not available. Cadets are covered by a \$5,000 accident insurance policy during these flights. If under twenty-one years of age, cadets must have the written permission of their parents or guardians to participate in such flights.

Flying Instruction Program. A flying instruction program administered by the best-qualified civilian instructors is held off-campus at a local flying school. A senior cadet who has qualified for pilot training is eligible for this program. Flying instruction is given the cadet at no charge. Transportation to and from the airport is included. Thirty-six and one-half hours of instruction and flying time are given the cadet. This qualifies him for a private pilot's license.

Discipline. AFROTC students, as cadets, are civilians and are not subject to the Uniform Code of Military Justice. Disciplinary training in the Cadet Corps is

formulated and administered by the cadets themselves. Cadets are subject to the rules and regulations of the Department of Air Science as well as those of the institution. Violation of these rules may mean discharge from the AFROTC program, but does not mean that students must leave college. It will, however, result in the cancellation of their draft deferment. Disciplinary matters are handled by the Dean of Students.

Period of Non-Attendance. Students enrolling in AFROTC who enter college on a five-year program are given a year of non-attendance between their basic and advanced courses. During this period cadets remain deferred from the draft. They must, however, attend Leadership Laboratory.

L.D.S. Missions. Students called on L.D.S. missions will be released from the AFROTC program and upon their return will be accepted back into the program if they meet all the conditions in force at the time of their return.

Uniform and Allowances. All items of uniform and all academic texts for the four-year program are issued to the cadet at no charge. A fine library of military books and supplemental references for his academic studies is available for his free use. If selected for the advanced course, he receives an officer's uniform which he retains as his personal property upon successful completion of the program. During his advanced two years the cadet receives from the government subsistence at the rate of 90c per day while he is in school. This amounts to approximately \$80 per quarter or \$525 in cash payments for the two years. The cadet also receives medical care, food, and clothing while at summer training and is paid \$75 and reimbursement for transportation to and from training at the rate of five cents per mile.

Course Fee Deposit. A \$14.00 deposit is required of each student at the beginning of each school year. The purpose of this fee is to protect the United States Government and the University from loss of textbooks and articles of uniform. A \$1.50 course fee per quarter is withheld from this deposit. At the end of each school year \$9.50 is returned to the student, providing there has not been a loss of uniform or books.

Lower Division Courses

Basic Course: Air Age Citizenship Education.

110, 111, 112 (10, 11, 12). Foundation of Air Power. (2:2:1 ea.) A.W.S. Staff
Freshman year. A general survey of air power designed to provide the student with an understanding of the elements of air power and basic aeronautical science.

220, 221, 222 (20, 21, 22). Elements and Potentials of Air Power. (2:2:1 ea.) A.W.S. Staff

Sophomore year. Careers in the USAF, moral and spiritual foundations of leadership, introduction to aerial warfare, targets, weapons, aircraft, bases and operations.

Upper Division Courses

Advanced Course: Air Force Officer Development.

301, 302, 303 (101, 102, 103) The Air Force Officer in the Air Age. (3:4:1 ea.) A.W.S. Staff

Junior year. Introduction to advanced AFROTC, creative problem solving, instructing in the AF, the AF commander and his staff, communicating in the AF, the military justice system, air navigation and weather, AF base functions, preparation for summer training.

412, 413, 414 (112, 113, 114). Leadership and Air Power Concepts. (3:4:1 ea.) A.W.S. Staff

Senior year. Principles of leadership and management, military aspects of world political geography, military career guidance, military aviation and the evolution of warfare, briefing for commissioned service.

Animal Husbandry

Professors: Morris (chairman, 150 B), Cannon.

Associate Professor: Richards.

Assistant Professors: Shumway, Hoopes.

Instructor: Mikkelsen.

The Department of Animal Husbandry offers courses for students majoring in this field, training for the following activities: (1) practical livestock farming and operation, (2) livestock and herd managers, (3) commercial and government agricultural positions, (4) pre-veterinary preparation, (5) advanced study toward the M.S. or Ph.D. degrees, (6) agricultural teaching when program is planned in that direction.

A student majoring in animal husbandry may choose his field of study from either animal husbandry proper (cattle, sheep, swine and horses), dairy husbandry, poultry husbandry, or a combination of these. A minimum of 36 hours is required for a major.

Animal husbandry majors are encouraged to take more than the required number of hours needed for graduation in both the physical and biological sciences.

Animal husbandry students are required to take two courses from each of the following areas:

Agricultural Economics 101, 123, 125, 410

Agronomy 141, 251

Horticulture 101, 102, 103, 310

Industrial Arts: Any two courses.

Any animal husbandry major who desires most of his training in the study of meat animals should take the following courses in animal husbandry: 120, 207, 208, 215, 311, 312, 591, 592, 593.

If a student desires most of his training in dairy production, he should select from the following courses: 161, 207, 208, 215, 311, 312, 362, 460, 591, 592, 593. In addition one or more courses in bacteriology should be taken.

If a student desires training in poultry husbandry, he should select from the following courses: 170, 171, 207, 215, 370, 373, 477, 571, 591, 592, 593.

Students planning to return to the farm or do service work should fill elective courses from the following areas, depending on specific likes and desires:

Agricultural Economics 101, 123, 320, 360, 410, 425

Agronomy 260, 262, 451, 455, 573

Bacteriology 121

Botany 101, 355, 410, 430, 455, 466

Horticulture 101, 102, 103, 310

Industrial Arts 103, 120, 125, 150, 205, 207, 308, 365, 401

Journalism 211, 571

Speech 101 or 102, 121

Requirements for those students preparing for a pre-veterinary program are listed on page 108 of this catalog.

Students planning to do graduate work should elect from the following courses:

Bacteriology 121, 301, 501

Botany 101, 355
 Chemistry 105, 106, 107, or 111, 112, 113; 220, 284, 351, 352, 353,
 581, 582, 583
 German 101, 102, 103
 Mathematics 111, 112, 231
 Zoology 105, 164, 176, 263, 365, 370, 373, 376, 417

The schedule shown below is a suggested outline for animal husbandry majors:

Freshman Year**Sophomore Year**

	A	W	S		A	W	S
An. Hus. 207, 215, 120	5	5	3	An. Hus. 161 or 170	4		
Zoology 105	5			An. Hus. 208			4
English 111, 112, 113	3	3	3	Agronomy 141 or 251		4	
Religion	2	2	2	Ag. Econ. 123, 125, 410	3	3	
Phys. Educ.	1	1	1	Chem. 105, 106, 107 or			
Hort. 101 or 103		3		111, 112, 113	5	5	5
Health 130			1	Hort. 102 or 310		3	3
Agronomy 141 or 251			4	Religion		2	2
Electives or AFROTC	2	4	4	Electives or AFROTC	4	1-2	5-6
Total Hours	18	18	18	Total Hours	18	18	18

Lower Division Courses

- 101 (1). General Animal Husbandry.** (5:5:0) A. Not given this year. Cannon
 A general course in animal husbandry for non-animal husbandry majors.
- 120 (5). Livestock Judging and Selection.** (3:2:4) S. Shumway
 A study of animal types and their relation to the functions of animals.
- 161 (21). Elements of Dairying.** (4:3:3) A. Richards
 General principles of breeding, feeding and management of dairy cattle.
- 166 (6). Dairy Judging and Selection.** (3:2:4) S. Staff
 A critical study of dairy types and productive functioning.
- 170 (90). General Poultry.** (4:3:2) A.W. Morris
 A general course in poultry husbandry with the problems of feeding, housing, and management.
- 171 (91). Poultry Practices.** (1-2:0:7) A.W.S. Prerequisite: Animal Husbandry 170. Morris
 Project and laboratory experience in raising broilers and young stock.
- 207 (7). Feeds and Feeding.** (5:5:0) A.W. Shumway
 Principles of nutrition and their application to all types of farm animals.
- 208 (32). Fitting and Showing Livestock.** (4:2:6) S. Richards
 Each student will be assigned an animal to fit and show at one of the spring shows and the campus livestock show.
- 215 (15). Fundamentals of Animal Breeding.** (5:5:0) A.W. Richards
 A study of the principles involved in breeding farm animals, including physiology of reproduction, heredity and variation, selection and systems of breeding.

Upper Division Courses

- 311 (111). Animal Physiology and Anatomy.** (5:5:0) A. Prerequisite: Zoology 105. Hoopes
 Physiology and anatomy of farm animals.
- 312 (112). Animal Diseases.** (5:5:0) W. Prerequisite: Animal Husbandry 311. Hoopes

A study of the causes, prevention, and practical treatment of common diseases of farm animals.

- 313 (113). **Animal Disease Laboratory.** (2:0:4) S. Prerequisite: Animal Husbandry 312. Hoopes
Laboratory and field approach to animal hygiene.
- 325 (160). **Meats and Meat Preparation.** (3:0:6) W. Hoopes
Care of the meat from slaughter to packaging; inspection of slaughtering and meat plants; processing.
- 330 (150). **Horse Husbandry.** (2:0:4) S. Hoopes
A brief study of breeds of horses, with emphasis on feeding, training, and management.
- 335 (154). **Beef Production.** (4:3:3) S. Prerequisite: Animal Husbandry 207. Shumway
The problems of breeding, feeding and management of range cattle, feeder cattle, and purebreds.
- 336 (184). **Animal Husbandry Practices.** (Arr.) A.W.S. Staff
Each student will be required to feed, manage and care for the animals selected and assigned to him. Students desiring to bring their own dairy cows and care for them with facilities provided by the University may do so.
- 340 (155). **Sheep Production.** (3:2:3) S. Prerequisites: Animal Husbandry 207, 215. Shumway
Feeding, care, and management of farm and range sheep.
- 345 (156). **Swine Production.** (3:2:3) W. Prerequisites: Animal Husbandry 207, 215. Shumway
Breeding, feeding, and management of swine on western farms.
- 362 (116). **Pedigree and Herd Book Study.** (2:2:0) W. Prerequisite: Animal Husbandry 215. Richards
Interpretation of pedigrees and research in herd books of the major breeds of livestock.
- 365 (110). **Milk and Milk Processing.** (5:3:4) W. Shumway
Modern methods of producing, grading, and processing dairy products.
- 370 (190). **Poultry Management.** (3:2:2) W. Prerequisite: Animal Husbandry 170. Morris
The management and business phases of poultry production. Problems involved in managing laying flocks, broilers and replacement pullets.
- 373 (New). **Poultry Diseases.** (3:3:0) A. Hoopes
A general treatise of poultry diseases, their control and treatment.
- 378 (191). **Turkey Management.** (3:2:2) S. Morris
The principles, practices, and problems of turkey production, including brooding, feeding, growing, and marketing.
- 420 (105). **Advanced Judging.** (3:0:6) A. Prerequisite: Animal Husbandry 120. Shumway
Advanced work in livestock judging. The judging team will be picked from this class.
- 427 (107). **Advanced Feeding.** (4:3:3) W. Prerequisite: Animal Husbandry 207. Shumway
Newest knowledge of nutrition and its application to livestock.
- 460 (171). **Dairy Production.** (4:3:3) W. Richards
Advanced work in feeding, breeding, and milk secretion.

- 463 (105). Artificial Insemination.** (3:2:3) S. Prerequisite: Animal Husbandry 215.

Methods and techniques of artificial breeding will be studied, accompanied by laboratory work.

- 477 (194). Poultry Feeding.** (3:2:2) A. Prerequisite: Animal Husbandry 170. Morris

The principles of nutrition as they apply to all types of poultry.

Advanced Undergraduate or Graduate Courses

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| 515 (115). Advanced Animal Breeding. (3:3:0) S. | Richards |
| 564 (271). Secretion of Milk. (3:3:0) A. | Staff |
| 571 (189). Advanced Poultry Practices. (1-3:0:3-9) A.W.S. | Morris |
| 591 (176). Animal Husbandry Survey. (1:1:0) A. | Cannon |
| 592 (174). Current Problems. (2:2:0) W. | Cannon |
| 593 (175). Seminar. (1:1:0) S. | Cannon |

Graduate Courses

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| 601 (260). Experimental Techniques and Design. (3:0:9) A.W.S. | Staff |
| 607 (New). Advanced Nutrition of Ruminants and Non-ruminants. (3:3:0) W. | Shumway |
| 660 (211). Advanced Livestock Management (3:1:4) A.W.S. | Staff |
| 691, 692, 693 (New). Animal Husbandry Research. (1-3:0:3-9 ea.) A.W.S. | Staff |
| 694, 695, 696 (New). Animal Husbandry Research. (1-3:0:3-9 ea.) A.W.S. | Staff |
| May include research in breeding, diseases, artificial insemination, or nutrition in dairy husbandry, poultry husbandry or animal husbandry. | |
| 699 (300). Thesis for Master's Degree. | Staff |

Archaeology

Associate Professor: Jakeman (chairman, 203 ESC).

Assistant Professor: R. T. Christensen.

A major in archaeology requires the completion of 40 hours of work in this department, including courses 150, 221, 241, 276, 310, 327, 360, 531, 551, 571, and 594. A major in this field will prepare the student for postgraduate specialization in either (1) Old World archaeology and ancient history or (2) American archaeology and anthropology, leading to teaching and/or research and writing in these areas. For fullest preparation, a minor in history is recommended (including History 110, and either 388, 500, 504, 507, 508 and 555 for specialization in Old World archaeology and ancient history or 150, 388, 553, 555, and 564 for specialization in American archaeology and anthropology); also recommended are a minor in French or German (for specialization in Old World archaeology and ancient history) or Spanish (for specialization in American archaeology and anthropology) and the following courses in other departments: Geology 103, Geography 105 and 303, Sociology 111 and 460, Speech 101, English 215 and 216, Art 101, 259 and 303, and Physics 177.

A minor in archaeology requires the completion of 20 hours in this field including courses 150, 221, 310 and 360.

Credit in religion as well as humanities may be obtained for courses 310 and 360. (See Archaeology in the Division of Religion.)

In this department, courses not offered this year will be given the following year.

Lower Division Courses

- 150 (1). Introduction to Archaeology.** (4:4:0) A.W.S. (G-HA) Staff
The fields and major discoveries of archaeology, the science which reconstructs the early history of man from the evidence of his actual material remains. Special attention is given the important bearing of archaeology upon the scriptures.
- 221 (21). Peoples and Culture.** (4:4:0) W. (G-HA) Recommended: Archaeology 150 or History 110. Christensen
An introduction to ethnology (study of peoples) and cultural anthropology (study of human culture), emphasizing the characteristics of ancient and primitive peoples and cultures.
- 241 (50). The Races of Man.** (2:2:0) S. Prerequisite: Archaeology 221. Jakeman
A further course in ethnology and an introduction to physical anthropology, in which the ancient and living peoples of the world will be classified as to physical type.
- 276 (76). Indians of the Americas.** (3:3:0) A.W. Prerequisite: Archaeology 221; recommended: Archaeology 241. Christensen
A course in American ethnology. The aim is to give the student a picture of the American Indians at the time of the coming of the Europeans.

Upper Division Courses

- 310 (110). General Near Eastern and Biblical Archaeology.** (3:3:0) A.W.S. (†G-HA; †G-R) Prerequisite: Archaeology 150 or History 110 or consent of the instructor. Jakeman, Christensen
A survey of the discoveries of archaeology in Mesopotamia, Egypt, Palestine, and other Near Eastern-Biblical lands, with special attention to those bearing upon the important historical claims of the Bible.

- 318 (118). General Classical and Christian Archaeology.** (3:2:2) S. (†G-HA) Not given this year. Prerequisite: History 110; recommended: History 504 and 508. Jakeman
A survey of the excavations and antiquities illustrating the development of classical Greek and Roman architecture and art.
- 327 (127). General Prehistoric Archaeology of the Old World.** (3:2:2) Not given this year. Prerequisites: Archaeology 150 and 221; recommended: Archaeology 241 and Sociology 460. Christensen
A survey of the findings of archaeology relating to the early history of man in the Old World before the beginning of written history with an introduction to primitive and ancient technology.
- 360 (130). Ancient Civilizations of America.** (3:3:0) A.W.S. (†G-HA; †G-R) Prerequisite: Archaeology 150 or consent of instructor. Jakeman
A survey of the discovered archaeological history of the New World, followed by a study of the important problems of the origin of its ancient civilizations, with special attention to the claims of the Book of Mormon.
- 388 (133). Early Peoples of Middle America.** (3:2:2) A. Prerequisite: Archaeology 360; recommended: Archaeology 241 and 276. Jakeman
A study in the ethnology and ancient history of Mexico and Central America, especially as to the early peoples and history of the central Mesoamerican or Book of Mormon area, according to the native Indian and Spanish chronicles.
- 455 (135). Archaeology of Middle America.** (3:2:2) W. Prerequisite: Archaeology 388. Jakeman
The progress and latest results of archaeological research in Mexico and Central America, especially as to the characteristics and history of the ancient civilizations of the central Mesoamerican or Book of Mormon area.
- 465 (140). Archaeology of South America.** (3:2:2) Not given this year. Prerequisites: Archaeology 150 and 276; recommended: Archaeology 241 and 360. Christensen
The progress and latest results of archaeological research in the ancient civilizations and traditionary history of the Andean region.
- 475 (145). Archaeology of North America.** (3:2:2) S. Prerequisite: Archaeology 276; recommended: Archaeology 241 and 360. Christensen
The progress and latest results of archaeological research in North America north of central Mexico, especially as to the prehistoric agricultural peoples of the Southwest and eastern United States.

Advanced Undergraduate or Graduate Courses

- 531 (151). Methods of Archaeological Research.** (2:2:0) S. Jakeman
The main steps in archaeological research, with special attention to methods of discovery and excavation of ancient sites and composition of the field report.
- 551 (161). Field Archaeology.** (4:0-2:8-4) Not given this year. Prerequisite: Archaeology 531. Christensen
Student participation in the actual excavation of a prehistoric Indian mound of Utah Valley and the processing and recording of the excavated material.
- 571 (171). Interpretive Archaeology.** (3:3:0) Not given this year. Prerequisites: Archaeology 327, 531, and 551; recommended: Sociology 460 and English 215 and 216. Christensen
Interpretation of empiric archaeological data as to culture meaning, methods of chronological and historical interpretation, and practice in archaeological ethnography and historiography.
- 590 (New). Museum and Field Studies.** (3-9:0:6-18) Staff
Guided studies at important museums and archaeological sites of the United States or Latin America and a report on these studies.

- 594 (184). Seminar. (2:2:0) (Not given this year.) **Jakeman**
 Problems and methods of comparative archaeology.
- 596, 597, 598 (191, 192, 193). Readings in Archaeology. (2:0:6 ea.) A.W.S. **Staff**

Guided readings and a paper in one to three of the following fields of archaeology: early prehistoric, later prehistoric of the Near East, Mesopotamian and biblical, Egyptian and biblical, Syro-Palestinian and biblical, Aegean and Homeric, classical, later prehistoric of northern Europe, Christian, later prehistoric and historic of eastern Asia, Polynesian, Mesoamerican, Andean, Southwest, later prehistoric of eastern United States, general comparative.

Graduate Courses

- 601 (201). History and Theory of Archaeology. (2:2:0) A. **Christensen**
- 621 (221). Archaeological Surveying. (2:1:2) A. **Christensen**
- 631 (231). Ceramic Typology. (1:1:0) W. **Jakeman**
- 650 (250). Studies in Comparative Stratigraphy: Near East. (2:0:6) A.W. **Staff**
- 655 (New). Special Studies in Biblical Archaeology. (2:0:6) S. **Staff**
- 660 (260). Studies in Comparative Stratigraphy: Mesoamerica. (2:0:6) A.W. **Staff**
- 665 (New). Special Studies in Book of Mormon Archaeology. (2:0:6) S. **Staff**
- 671, 672 (271, 272). Maya Hieroglyphics. (2:2:0 ea.) W.S. **Jakeman**
- 691 (294). Library Research. (2:0:6) A.W.S. **Staff**
- 694 (297). Field or Museum Research. (3:0:9) **Staff**
 Guided field or museum research in the Southwest.
- 695 (297). Field or Museum Research. (5:0:15) **Staff**
 Guided field or museum research in Mexico or Central America.
- 696 (297). Field or Museum Research. (8:0:24) **Staff**
 Guided field or museum research in the Near East (Palestine, Egypt, or Mesopotamia).
- 699 (300). Thesis for Master's Degree. (Arr.) **Staff**

These courses also count in Archaeology:

- Art 303. Ancient and Primitive Art. (2:2:0)
- Semitic Languages 604. The Reading of Ancient Hebrew Inscriptions. (2-3:2-3:0)
- Semitic Languages 621, 622, 623. Elementary Akkadian. (2:2:0 ea.)
- Semitic Languages 625, 626, 627. Elementary Egyptian. (2:2:0 ea.)

Archaeology

(See also courses in Religion.)

Art

Professors: de Jong, E. M. Jenson, B. F. Larsen (emeritus).

Associate Professors: Mathews (chairman, 296 E), Andrus, Gunn.

Assistant Professors: Turner, W. B. Wilson.

Instructors: Johansen, Knell, L. Taylor.

Students who elect their major in art are required to complete twelve hours in Art 111, 121, and 122 or their equivalents before taking upper division work. In addition, a major in art must include 9 hours in art history and 24 hours in one of the seven areas of concentration.

The curriculum for art majors who are concentrating on commercial art and those who are preparing to teach art in the secondary schools may lead either to a Bachelor of Arts or a Bachelor of Science degree. Majors who are concentrating on crafts, graphics, interior design, painting or sculpture will work toward a Bachelor of Arts degree.

Art students intending to teach art on the secondary level must plan the following sequence of courses commencing five quarters before graduation, or plan to extend certification requirements beyond the senior year.

The student should note that courses offered in this sequence through the Art department are taught only once during the year.

Plan One

Sophomore year	
Spring Quarter	E.R.S. 305
Junior Year	
Autumn Quarter	Art 377
Winter Quarter	Art 478
Spring Quarter	Art 479
Senior Year	
Ed. Inst. 450, Ed. Phil. 415	
Health 362 and Ed. Adm. 310 may be	
taken any quarter.	

Plan Two

Junior Year	
Spring Quarter	E.R.S. 305
Senior year	
Autumn Quarter	Art 377
Winter Quarter	Art 478
Spring Quarter	Art 479
Summer School	Ed. Inst. 450,
	Ed. Phil. 415

The courses in art are presented under the following divisions:

Commercial Art: 239, 240, 340, 341, 342, 343, 447, 448, 544, 545, 546.

Crafts: 259, 263, 359, 360, 361, 362, 366, 567.

Design and Advanced Design: 110, 111, 310, 311.

Drawing and Advanced Drawing: 121, 122, 321, 322.

Graphics: 250, 350, 351, 352.

History and Appreciation: 101, 303, 304, 305, 406, 407, 408, 501.

Interior Design: 313, 314, 415, 416, 417.

Painting: 227, 233, 327, 328, 329, 333, 334, 335, 474, 475, 476, 580, 581, 582, 586, 587, 588.

Sculpturing: 256, 356, 357, 358.

Areas of Concentration

Commercial Art

	Hours
Commercial Art	8
Design	2
Drawing	2
Graphics	2
Painting	7
Photography	3
Marketing	5
Total Hours	29

Crafts

	Hours
Crafts	8
Design	2
Drawing	2
Graphics	2
Interior Design	2
Painting	4
Sculpture	2
Elective	2
Total Hours	24

Graphics	Hours
Graphics	8
Crafts	2
Design	2
Drawing	2
Interior Design	2
Painting	4
Sculpture	2
Elective	2
Total Hours	24

Interior Design

Interior Design	9
Crafts	2
Drawing	2
Graphics	2
Painting	7
Sculpture	2
Total Hours	24

Painting

Painting	8
Crafts	2
Design	2
Drawing	4

Graphics	Hours
Graphics	2
Interior Design	2
Sculpture	2
Elective	2
Total Hours	24

Sculpture

Sculpture	8
Crafts	2
Design	2
Drawing	2
Graphics	2
Interior Design	2
Painting	4
Elective	2
Total Hours	24

Teaching Art

Crafts	8
Advanced Design	2
Commercial Art	4
Graphics	2
Interior Design	2
Painting	4
Sculpture	2
Total Hours	24

The minimum requirements for a teaching minor in art for secondary schools should include:

Drawing	4 to 6	Painting	4
Design	4	Sculpture	2
History of Art	3	Interior Design	2
Crafts	2 to 4	Graphics	2
Commercial Art	2	Total Hours	27

Lower Division Courses

- 101 (1). Introduction to Art. (2:2:0) A.W.S. (G-HA)** Turner
 Recommended for everyone who desires a better understanding of and a greater appreciation for painting, sculpture, architecture, and other graphic and plastic arts. Not for art majors.
- 110 (10). Theory and Practice of Design. (2:2:2) A.W.S. (G-HA)** Gunn, Staff
 Study of the fundamental principles of art affecting the use of form, color, and texture in structural design and decoration. Not for art majors.
- 111 (11). Basic Design. (4:4:4) A.W.S. (G-HA)** Staff
 Application of the principles of design in use of plastic and graphic materials. Either 110 or 111 may be taken for GE credit, but not both.
- 121 (21). Elementary Drawing. (4:4:4) A.W.S. (G-HA)** Staff
 Drawing with various media. Emphasis on development of perceptive skill, experience in organization, and representation of the elements of visual communication.
- 122 (22). Elementary Figure Drawing. (4:4:4) A.W.S. (G-HA)** Andrus, Gunn
 Drawing from the model. Study of and experience with the elements of graphic expression. Form is emphasized.
- 227 (27). Oil Painting. (2:2:4) A.W.S. (G-HA)** Turner
 Introduction to the use of oil colors as a medium of expression.

- 233 (33). **Water Color Painting.** (2:2:2) A.W.S. (G-HA) Turner
Survey and application of the various techniques of water color painting.
- 239 (39). **Pen Lettering.** (2:0:2) A.W.S. Jenson
Study of basic pen alphabets.
- 240 (40). **Brush Lettering.** (2:2:2) A.W.S. Gunn
Study of brush manipulation and letter structure for display advertising.
- 250 (50). **Print Making.** (2:2:4) A.W.S. Andrus
Introduction to woodcut, engraving, etching, lithography, and silk screen.
- 256 (56). **Sculpture.** (2:2:4) A.W.S. Turner
Modeling and casting.
- 259 (59). **Ceramics.** (2:2:4) A.W.S. (G-HA) Wilson
Ceramics and pottery with clay as the basic medium.
- 263 (63). **Crafts.** (2:2:4) A.W.S. (G-HA) Staff
Leather, wood, plastics, and other media used as a basis for creative design.

Upper Division Courses

- 303 (103). **Ancient and Primitive Art.** (2:2:0) A.(G-HA) Mathews
Introduction to the history of art from prehistoric time to the early Christian era. Primitive art forms will also be studied.
- 304 (104). **Medieval Art.** (2:2:0) W.(G-HA) Mathews
Study of architecture, painting, and sculpture from the dissolution of the Roman empire to the Renaissance.
- 305 (105). **Renaissance Art.** (2:2:0) S. (G-HA) Mathews
Study of the history of art through the Renaissance and to the close of the eighteenth century.
- 310 (110). **Advanced Design.** (3:2:0) A. Darais
A study of art structure as a means for expression of ideas and emotions.
- 311 (111). **Mural Design.** (2:2:4) S. Prerequisite: Art 310. Darais
Principles of design applied to mural decoration.
- 313 (113). **Home Planning.** (2:2:0) W. Knell
Application of principles of design to home planning.
- 314 (114). **Interior Design.** (2:2:0) A.S. Taylor
Decorative and functional features of the interior of the home.
- 321 (121). **Interpretive Drawing.** (2:2:2) W. Darais
Advanced work in drawing with emphasis on development of individuality of expression.
- 322 (122). **Figure Drawing.** (2:2:2) A.W.S. Andrus
Drawing from the model with emphasis on structure and expressive elements.
- 327, 328, 329 (127, 128, 129). **Oil Painting.** (2:2:4 ea.) A.W.S. Turner
Outdoor, still life, and landscape painting is emphasized in the autumn, winter and spring terms respectively.
- 333, 334, 335 (133, 134, 135). **Water Color Painting.** (2:2:2 ea.) A.W.S. Turner
Landscape, still life, and figure composition are emphasized in the autumn and winter. Outdoor sketching is presented in the spring.
- 340 (140). **Lettering.** (2:2:2) A.W. Prerequisite: Art 239 or 240. Gunn
Skills and letter structure for lettering reproduced for the printed page.

- 341 (141). Layout. (2:2:2) S.** Prerequisite: Art 140. **Gunn**
Design principles as they pertain to the organization of elements on the printed page.
- 342 (142). Illustration. (2:2:2) W.** **Gunn**
Black and white illustration in brush and ink, watercolor, scratchboard, and related techniques for line and half-tone reproduction.
- 348 (143). Fashion Illustration. (2:2:2) S.** **Gunn**
Fashion drawing in various media.
- 350 (150). Engraving and Woodcut. (2:2:4) A.** **Andrus**
Work in relief print making.
- 351 (151). Etching and Lithography. (2:2:4) W.** **Andrus**
Work on copper and zinc employing aquatint, intaglio and soft ground as well as use of lithographic stone.
- 352 (152). Silk Screen. (2:2:4) S.** **Andrus**
Preparation of various types of stencils for print making and commercial work.
- 356, 357, 358 (156, 157, 158). Sculpture. (2:2:4 ea.) A.W.S.** **Wilson**
Use of clay as an expressive medium, modeling the full figure, and plaster casting, stone and bronze.
- 359, 360, 361 (159, 160, 161). Ceramics. (2:2:2: ea.) A.W.S.** **Wilson**
Work in all phases of ceramics, designing through firing.
- 362 (162). Textile Design. (2:2:2) A.W.S.** **Johansen**
Silk screen, block printing, stenciling, painting and dyeing as media for textile design.
- 366 (166). Metalwork and Jewelry. (2:2:2) W.** **Johansen**
Copper, silver, wood, enameling in creative design.
- 406 (106). Art History and Appreciation. (3:3:0) A.W.S. (G-HA)** **Mathews**
A survey course designed to give the student an overview of the art of the western world. Interpretation and classification of the major styles and artists.
- 407 (107). Contemporary Art. (3:3:0) W. (G-HA)** **Staff**
The rise and progress of contemporary art in Europe and America.
- 408 (108). American Art. (3:3:0) (G-HA)** **Staff**
History and evaluation of painting, sculpture, architecture, and industrial arts in America.
- 415, 416, 417 (115, 116, 117). Interior Design. (3:3:0 ea.) A.W.S.** **Taylor**
History of interior design. Study of period furnishings. Practical study of manufacture, design, installation, and care of media and materials used in interior design.
- 447 (147). Portrait Photography. (3:2:3) W.** **Staff**
General portrait studio procedures, including retouching, portrait dark-room techniques. Emphasis on the plastic quality of light on the human face and figure.
- 448 (147). Pictorial Photography. (3:2:3) S.** **Staff**
Study of art structure in its application to photography. Practical experience in photographing the landscape, still-life and human figure.
- 474, 475, 476 (174, 175, 176). Portrait and Figure Painting. (2:0:4 ea.) A.W.S.** **Andrus**
Painting the clothed figure with special emphasis on design, study of character, three-dimensional form in space, and expressive devices.

Advanced Undergraduate or Graduate Courses

- 501 (101). **Aesthetics.** (3:3:0) W. (G-HA) de Jong
Theoretical and practical criteria of aesthetic values.
- 544, 545, 546 (New). **Advanced Commercial Art.** (2:2:4 ea.) A.W.S. Gunn
Professional standards in advanced lettering, illustration and layout are emphasized. In the third quarter, commercial art experience is correlated with a practicing agency for students judged proficient by a faculty committee.
- 567 (167). **Wood Carving.** (2:2:2) S. Wilson
Bas-relief and carving in the round with emphasis on design.
- 580, 581, 582 (180, 181, 182). **Mural Painting.** (2:2:4 ea.) A.W.S. Darais
Historical backgrounds, mural design, mural painting.
- 586, 587, 588 (186, 187, 188). **Studio Art.** (1-4:1-4:2-8 ea.) Staff

ART EDUCATION

- 226 (Ed. Inst. 106). **Art for Elementary Teachers.** (3:3:0) A.W.S. Gunn,
Jenson, Wilson, Mathews
Materials and procedures for stimulating and guiding children in various phases of art in the elementary school.
- 377 (120). **Basic Classroom Procedures.** (4:4:3) A. Prerequisite: E.R.S. 305. Gunn
For course description and fees see Education: Instruction 377.
- 478 (138). **Unit Planning and Teaching.** (4:3:5) A.W.S. Prerequisite: Art 377.
For course description and fees see Education: Instruction 478. Gunn
- 479 (139). **Secondary Student Teaching.** (7:1:20) A.W.S. Prerequisite: Art 478.
For course description and fees see Education: Instruction 479. Gunn

Graduate Courses

- 602 (202). **Composition.** (Arr.) W. Turner
- 611 (211). **Contemporary Mural Design.** (Arr.) W. Darais
- 615 (215). **Period Furnishing.** (3:3:0) A. Taylor
- 616 (216). **Decorative Material for Interior Design.** (3:3:0) W. Taylor
- 617 (217). **Practical Problems in Interior Design.** (3:3:0) S. Taylor
- 621, 622, 623 (221, 222, 223). **Advanced Drawing and Painting.** (Arr.) A.W.S. Andrus
- 624, 626 (224, 226). **Landscape Painting.** (Arr.) A.S. Turner
- 625 (225). **Still-Life Painting.** (Arr.) W. Turner
- 627, 628, 629 (227, 228, 229). **Pictorial Composition.** (Arr.) A.W.S. Turner
- 633, 634, 635 (233, 234, 235). **Advanced Water Color Painting.** (Arr.) A.W.S. Turner
- 639 (239). **Lettering and Layout for Reproduction.** (Arr.) A.W.S. Gunn
- 642 (242). **Various Media in Illustration.** (Arr.) W. Gunn
- 650 (250). **Experimental Relief Printing.** (Arr.) A. Andrus
- 651 (251). **Color Lithography and Etching.** (Arr.) W. Andrus

652 (252). Seriography. (Arr.) S.	Andrus
656, 657, 658 (256, 257, 258). Advanced Sculpture. (Arr.) A.W.S.	Wilson
665 (265). Ceramics. (Arr.) A.W.S.	Wilson
666 (266). Metal Work and Jewelry. (Arr.) W.	Johansen
667 (267). Wood Sculpture. (Arr.) S.	Wilson
668 (227). Teaching Art in Secondary Schools. (3:3:0) W.	Staff
671 (271). Survey of Recent Studies in Art Education. (3:3:0) A.	Gunn
674, 675, 676 (274, 275, 276). Portrait and Figure Design and Painting. (Arr.) A.W.S.	Andrus
680, 681, 682 (280, 281, 282). Design and Painting Mural Types. (Arr.) A.W.S.	Andrus
683, 684, 685 (283, 284, 285). Studio Art. (Arr.) A.W.S.	Staff
686, 687, 688 (286, 287, 288). Studio Art. (Arr.) A.W.S.	Staff
690, 691, 692 (290, 291, 292). Color. (2:2:4 ea.) A.W.S.	Andrus
695 (299). Seminar. (1:1:0) A.W.S.	Staff
699 (300). Thesis for Master's Degree. (Arr.)	Staff

These courses also count in Art:

Industrial Arts 464. Plastics. (2:0:4)

Business Management 347. Principles of Marketing. (5:5:0)

Business Management 455. Advertising: (5:5:0)

Bacteriology

Professor: J. V. Beck.

Associate Professors: D. H. Larsen (chairman, 124 B), Hallam.

Assistant Professors: Donaldson, Hoskisson

Instructor: Jackson.

Bacteriology is one of the subjects comprising the composite major in biological science designed for prospective teachers.

Medical technology is under the direction of the Department of Bacteriology. The advisor is Professor Donaldson.

The minimum requirements for a major in bacteriology are completion of the following courses or their equivalents in bacteriology and supporting fields: bacteriology, 33 hours; zoology or botany, 10 hours; Chemistry 101, 102, 103, 220, 284; and Mathematics 111. Recommended courses are Bacteriology 301, 361, 371, 381, 491, 501, 502, 511, 551; Botany 101, 410, 535; Chemistry 111, 112, 113, 221, 351, 352, 353, 581, 582, 583; Mathematics 111, 112, 231, 232, 233, 234; Physics 111, 112, 113; Zoology 105, 164, 176, 417.

The following curriculum is recommended for students who want adequate preparation for post-graduate university training in bacteriology. The courses of physics, advanced mathematics, and advanced chemistry may be replaced by other courses in the physical or biological sciences for students who do not plan on graduate work.

Freshman Year			
	A	W	S
Chemistry 111, 112, 113	5	5	5
Math. 111, 112, 231	5	5	5
English 111, 112, 113, or 115, 116	3	3	3
Religion	2	2	2
Physical Education	1	1	1
Health			2
Total Hours	16	16	18

Sophomore Year			
Chemistry 221	5		
Physics 111, 112, 113	5	5	5
Zoology or Botany		5	5
History 170			5
Social Science	5	5	
Religion	2	2	2
Total Hours	17	17	17

Junior Year			
	A	W	S
Bacteriology 301, 501, 502	5	5	5
Chemistry 351, 352, 353	5	5	5
Mathematics 232, 233	4	4	
English 250			4
Religion (Humanities)	3	3	3
Total Hours	17	17	17

Senior Year			
Bacteriology 511, 551	5	5	
Bacteriology 491	1	1	1
Chemistry 581, 582, 583	5	5	5
Religion	2	2	2
Elective (Humanities)	2		
Electives	3	5	10
Total Hours	18	18	18

Lower Division Courses

- 121 (21). General Bacteriology. (4:3:2) A.W.S. (G-BS) Staff
 A study of the general characteristics of microorganisms and their relation to man.

Upper Division Courses

- 301 (101). Microbiology. (5:3:6) A. (†G-BS) Prerequisite: Organic Chemistry.
J. Beck
 Introduction to microbiology.

- 311 (160). **Sanitation and Public Health.** (3:3:0) A.W.S. (G-BS) Staff
Sanitary and public health practices.
- 361 (119). **Food Microbiology.** (3:1:4) A. Prerequisite: Bacteriology 121 or 301. Staff
A study of the microbiology of food.
- 371 (120). **Dairy Microbiology.** (3:1:4) W. Prerequisite: Bacteriology 121 or 301. Hoskisson
A study of the microbiology of dairy products.
- 381 (121). **Water and Sewage Microbiology.** (3:1:4) S. (†G-BS) Prerequisite: Bacteriology 301. Staff
A study of the microbiology of water purification and sewage disposal.
- 401, 402, 403 (186, 187, 188). **Applied Clinical Diagnosis Laboratory.** (5:1-3:6-10 ea.) A.W.S. Larsen
Work is done in an approved hospital during a year's practical internship. Hospital selected must be accredited by Council of Medical Education of the A.M.A., and its pathologist and radiographic technician recognized by American Society of Clinical Pathologists. Credit allowed on basis of a statement from the approved pathologist that student has satisfactorily completed work.
- 491 (196). **Seminar.** (1:1:0) A.W.S. Staff
- 495 (198). **Special Problems in Bacteriology.** (Arr.) A.W.S. Staff
Individual work on research problems. Types of problems selected based on previous preparation of student.

Advanced Undergraduate or Graduate Courses

- 501 (181). **Pathogenic Microbiology.** (5:3:6) W. Prerequisite: Bacteriology 301 or consent of the instructor. Larsen
A study of the characteristics of pathogenic bacteria, viruses, rickettsia, yeasts, and molds.
- 502 (182). **Pathogenic Microbiology.** (5:3:6) S. Prerequisite: Bacteriology 501. Continuation of Bacteriology 501. Larsen
- 511 (183). **Immunology.** (5:3:6) A. Prerequisite: Bacteriology 501. Donaldson
Theories of immunity; training in serological methods.
- 531 (231). **Virology.** (5:3:6) W. Prerequisite: Bacteriology 501. Donaldson
Characteristics of viruses and virus diseases.
- 551 (201). **Advanced Microbiology.** (5:3:6) W. Prerequisite: Bacteriology 301. J. Beck
Cytology, taxonomy, genetics of microorganisms.

Graduate Courses

- 611 (241). **Advanced Immunology.** (3:3:0) S. Donaldson
- 652 (202). **Bacterial Metabolism.** (5:3:6) S. Prerequisite: Bacteriology 551. J. Beck
A study of bacterial metabolism of carbohydrates, proteins, nucleoproteins, etc.
- 671 (203). **Industrial Microbiology.** (5:3:6) S. Prerequisites: Bacteriology 101 and Biochemistry. Larsen

The role of microorganisms in the formation of such products as acids, alcohols, antibiotics, vitamins, and enzymes.

- | | |
|---|--------------|
| 691 (294). Graduate Seminar. (1:1:0) A.W.S. | Staff |
| 695 (299). Research to Furnish Data for Thesis. (Arr.) | Staff |
| 699 (300). Thesis for Master's Degree. (Arr.) | Staff |

These Courses Also Count in Bacteriology:

Agronomy 614. Advanced Soil Microbiology. (3:3:0)

Agronomy 615. Advanced Soil Microbiology Laboratory. (2:0:4)

Banking

(See courses in Business Management.)

Bible and Modern Scripture

(See courses in Religion.)

Botany

Professor: Harrison.

Assistant Professors: K. H. McKnight (chairman, 233 B), E. M. Christensen, Murdock, Stutz.

A major in botany is designed to prepare a student for a professional career in governmental service, industry, and research institutions in such positions as conservationist, range manager, geneticist, plant breeder, plant physiologist, mycologist, plant pathologist, plant quarantine inspector, taxonomist, museum curator, or teacher in secondary schools or institutions of higher learning.

Advisement for opportunities in range management is under the direction of the Department of Botany.

Students majoring in botany (except those planning to qualify for biology teaching or range management) should take the following courses:

Botany 101, 123, 145, 351, 390, 391, 410, 430, 445, 490, 491, 531, 535, 543, 546.

Recommended supporting courses:

Zoology 105, 164 or 263, 212, 230; Bacteriology 121 or 301; Agronomy 141, 307; Geology 101; Mathematics 101, 111, 112; Chemistry 111, 112, 113, 221; Physics 111, 112, 113.

Students planning to teach biology in secondary schools should take the following courses:

Botany 101, 123, 145, 230, 351 or 355, 390 or 391, 410, 430, 490 or 491, 531 or 535, 543; Zoology 105, 164, 230, 343 or 345, 346 or 347, 385, 496; Bacteriology 121.

Recommended supporting courses:

Agronomy 141; Geology 101; Mathematics 101, 111; Chemistry 105, 106, 107.

Students planning to qualify for positions in range management should take the following courses:

Botany 101, 112, 123, 145, 390 or 391, 393, 410, 430, 445, 455, 465, 466, 490 or 491, 571; Zoology 105, 164, 230, 550; Agronomy 141, 307, 573; Animal Husbandry 207; Agricultural Economics 350; three of the following: Animal Husbandry 335, 340, 415, Agricultural Economics 410.

Recommended supporting courses:

Chemistry 105, 106, 107 or 111, 112; Mathematics 111, 112; Geology 101, 102; Geography 401; Agricultural Economics 430, 530.

Lower Division Courses

- 101 (1). **General Botany.** (5:3:4) A.W.S. (G-BS) Prerequisite to further work in the plant sciences. Recommended for the non-science student. Staff Structure, physiology and reproduction of the higher plants.
- 112 (2). **The Plant Kingdom.** (4:3:3) A.W. (G-BS) McKnight
Survey of the plant kingdom, including the morphology of representative species.

- 123 (3). Plant Classification.** (5:3:4) S. (G-BS) Harrison
General principles of taxonomy and use of manuals with emphasis on classification of local flora.
- 145 (18). Principles of Genetics.** (3:3:0) A.W.S. (†G-BS) Prerequisites: Botany 101 or Zoology 105. Stutz
Study of the principles of heredity and variations.
- 175 (95). Histological Technique.** (3:1:6) A. Prerequisite: Botany 101. McKnight
Techniques of preparing plant tissues for microscopic examination.
- 230 (10). Trees and Shrubs.** (3:3:0) S. (G-BS) Staff
Names and characteristics of common trees and shrubs and their use as ornamentals and in commerce.

Upper Division Courses

- 310 (130). Advanced Taxonomy.** (3-5:1:4-8) S. Prerequisites: Botany 123, 145. Harrison
Critical study of the characteristics, ecology, and classification of a limited plant group or plants of a limited area.
- 351 (121). Anatomy.** (3:0:6) W. Prerequisite: Botany 101. Christensen
Origin, development, and maturation of the structures of vascular plants.
- 355 (112). General Cytology.** (4:2:4) A. Prerequisite: Botany 101 or Zoology 105. Stutz
Study of the organization and functions of protoplasm.
- 390, 391 (180, 181). Seminar—Junior Year.** (1:1:0 ea.) A.W. Required of all majors in their junior year. Staff
Presentation and discussion of topics from the current literature of the field.
- 393 (New). Seminar in Plant Ecology and Range Management.** (1:1:0) S. (Does not take the place of Botany seminar.) Christensen, Murdock
- 396 (New). Special Problems in Range Management.** (1-5:1-3:0-4) A.W.S. Staff
- 410 (140). Plant Physiology.** (5:3:4) W. Prerequisites: Botany 101, Chemistry 105 or 111. Harrison
Water relations, synthesis of foods, digestion, mineral nutrition, and growth in the higher plants.
- 430 (150). Plant Ecology.** (5:3:0) A. (Field trips to be arranged.) (†G-BS) Prerequisite: Botany 101 or Zoology 105. Christensen
Relation of plants to their environment, their adaptations to factors of soil and climate, and their influence on each other.
- 435 (165). Plant Geography.** (3:3:0) A. (†G-BS) Prerequisite: Botany 101 or Zoology 105. Murdock
Plant distribution and origin of plant communities in the light of present and recent geological conditions.
- 445, 446 (155, 156). Field Ecology.** (2:1:0 ea.) S. Includes one field trip of about one week's duration. Prerequisite: consent of instructor. Murdock
Field studies of plants and plant communities and the environmental conditions with which they are associated.
- 451 (166). Conservation of Natural Resources.** (3:3:0) W.S. (G-BS) Murdock
Need for, and means of providing, conservation of renewable natural resources.
- 455 (135). Range Forage.** (3:1:4) A. Prerequisite: Botany 123. Christensen
Characteristics, distribution, and value of the more important forage plants of the Western Range.

- 465 (New). **Range Revegetation and Improvement.** (4:3:3). S. Prerequisite: Botany 430. Christensen
Artificial and natural revegetation and the use and development of fencing, watering, and other range facilities.
- 466 (158). **Methods in Range Management.** (3-5:2:2-8) Su. Prerequisite: Botany 430. Staff
Field methods of estimating vegetation, measuring factors of soil and climate; principles of sampling applied toward the solution of simple field problems.
- 470 (170). **Diseases of Cultivated Plants.** (5:3:4) A. Prerequisite: Botany 101; recommended: Botany 535. Stutz
Important diseases of cultivated plants, their identification, causes, and methods of control.
- 490, 491 (183, 184). **Seminar—Senior Year.** (1:1:0 ea.) A. W. Required of all majors in their senior year. Staff
Presentation and discussion of topics from current literature of the field.
- 495, 496 (191, 192). **Special Problems.** (1-5:0:3-15 ea.) A.W.S. Staff

Advanced Undergraduate or Graduate Courses

- 531 (101). **Algae.** (3:1:5) S. Prerequisite: Botany 101. McKnight
Study of the structure, relationships, and life histories of the main groups of algae.
- 535 (102). **Fungi.** (3:1:5) A. Prerequisite: Botany 101. McKnight
Study of the structure, relationships, and life histories of representative fungi.
- 543 (103). **Mosses and Ferns.** (3:1:5) W. Prerequisite: Botany 101. McKnight
Study of the structure, relationships, and life histories of mosses, liverworts, and ferns.
- 546 (106). **Seed Plants.** (3:1:5) S. Prerequisite: Botany 101. McKnight
Study of the structure, relationships, and life histories of the seed plants.
- 571 (New). **Watershed Management.** (3:3:0) A. Field trips to be arranged. Murdock
Influence of vegetation on water supplies, floods, soil erosion, and runoff. Methods in managing and rehabilitating damaged watersheds.
- 590, 591 (285, 286). **Seminar.** (1:1:0 ea.) A.W. Staff
- 593 (New). **Special Problems in Range Management.** (1-5:0:3-15) A.W.S. Staff

Graduate Courses

- 604 (231). **Advanced Taxonomy.** (2-5:0:6-15) S. Prerequisites: Botany 123, 145. Stutz
- 615 (215). **Agrostology: Taxonomy and Ecology of Grasses.** (3:1:4) A. Prerequisite: Botany 123. Botany 145 recommended. Harrison
- 625 (215). **Cytogenetics.** (4:3:2) W. Prerequisite: Botany 355. Stutz
- 650 (New). **Speciation.** (3:3:0) S. Prerequisites: Botany 123, 145. Stutz
- 665 (New). **Lower Fungi.** (5:3:4) W. Prerequisite: Botany 112 or 535. McKnight
Classification, structure, and relationships of the myxomycetes and phycomycetes.
- 668 (New). **Higher Fungi.** (5:3:4) S. Prerequisite: Botany 112 or 535. McKnight

Classification, structure, and relationships of the ascomycetes. Fungi imperfectii and basidiomycetes.

- 690, 691, 692 (290, 291, 292). **Special Problems.** (2-5:0:6-15 ea.) A.W.S. Staff
- 699 (300). **Thesis for Master's Degree.** (Arr.) Staff
- 706 (260). **Experimental Ecology.** (3:2:2) S. Prerequisite: Botany 410, 430. Harrison
- 712 (245). **Plant Nutrition and Growth.** (3:2:2) A. Prerequisites: Botany 410; Chemistry 111, 112. Recommended: organic chemistry. Harrison
- 733 (New). **Grassland Ecology.** (3:3:0) S. Prerequisite: consent of instructor. Murdock
- 735 (New). **Forest Ecology.** (3:3:0) W. Prerequisite: consent of instructor. Christensen
- 742 (252). **Field Ecology.** (2:1:0) S. Extended field trip. Prerequisite: consent of instructor. Murdock
- 754 (268). **Conservation of Natural Resources.** (2-5:1:3-12) W. Prerequisite: consent of instructor. Murdock
- 758 (254). **Methods in Range Management.** (3-5:1:3-12) S. Prerequisites: Botany 430, 445. Staff

Business Administration

(See courses in Business Management.)

Business Education and Office Management

Associate Professors: E. L. Christensen (chairman, 129N), Croft, D. A. Peterson.

Assistant Professors: Crandall, Polson, Stansfield, E. P. Taylor.

Instructors: DeMille, Guymon, Herde.

Business Education

The program in business education is planned for those who desire to prepare for the teaching of business subjects in high school. This can be done concurrently with preparation for a secretarial or allied occupation, providing the student decides upon this dual preparation during his sophomore year or the early part of his junior year. Two options are available: Option One—with shorthand, and Option Two—without shorthand. Both men and women who complete requirements for teaching and an office occupation find excellent opportunities in either area.

A series of graduate courses is provided for students who elect a business education minor in a master's program, or for teachers who desire to fulfill state recertification requirements.

Office Management

There are two separate programs in this division. The program in office management provides a broad cultural and business-core foundation with emphasis in office administration. The program for the executive secretary also provides this broad foundation with concentration directed toward administrative assistants.

A minor in the secretarial division of this department requires completion of 20 hours including 104, 220, 311.

Business Education Major

	Recommended Years	
	Fr. So.	Jr. Sr.
General Education Requirements		
Religious Education	12	12
Physical Science (Classes in two depts.)	9	
Biological Science	8	
Social Science: Economics 101	5	
History 170	5	
Upper Division Elective		5
Humanities and Aesthetics (Classes in two depts.)	5	10
English Composition	9	
Physical Education and Health	5	
Professional Education Requirements		
E.R.S. 305 (Development and Learning)		6
Health Ed. 362 (Health Education for Teachers)		3
Bus. Ed. 377 (Basic Classroom Procedures)		4
Bus. Ed. 478 (Unit Planning and Teaching)		4
Bus. Ed. 479 (Student Teaching)		7
Ed. Inst. 450 (Principles of Teaching)		3
Ed. Phil. 415 (Educational Values)		3
Ed. Adm. 310 (State, School and Teacher)		3

Business Education Requirements—Option One (With Shorthand)

Off. Mgt. 101,* 102,** 103, or equiv.; 104 req. 2-4

	Fr. So.	Jr. Sr.
Off. Mgt. 111,* 112,* 113, 214, or equiv.	8-12	
Off. Mgt. 311 (Office Transcription)	4	
Off. Mgt. 106 (Calculating Machines)	2	
Off. Mgt. 220 (Business Communication)	3	
Accounting 101 and 102	10	
Off. Mgt. 470 (Records Control and Off. Mach.)		3
Off. Mgt. 475 (Directed Office Experience)		5
Total of 36 hrs. required in Office Mgt.; additional courses to complete this total must be chosen from		
Off. Mgt. 305, 320, 325, 480, 485, 486; Bus. Mgt. 480, 481....	3-13	

*Not allowed if student has one yr. credit in this subject in high school.

**Not allowed if student has two yrs. credit in this subject in high school.

Office Management Requirements—Option Two (Without Shorthand)

Accounting 101 or 201, and 102 or 202, and 316 or 555	12-14	
Bus. Mgt. 480 and 481 (Executive Lectures)	1-2	
Off. Mgt. 102, 103, 104 or equiv.	6	
Off. Mgt. 106 (Calculating Machines)	2	
Off. Mgt. 220 (Business Communication)	3	
Off. Mgt. 305 (Methods for Anal. Off. Oper.)		5
Off. Mgt. 320 (Business Writing and Reporting)		3
Off. Mgt. 325 (Org. and Dict. of Bus. Corres.)		2
Off. Mgt. 470 (Records Control and Off. Mach.)		3
Off. Mgt. 480 (Case Studies in Off. Mgt.)		3
Off. Mgt. 485, 486 (Lectures in Off. Adm.)		1-2

Teaching Major: Either Option One (Business Education Requirements) or Option Two (Office Management Requirements) completes requirements for a teaching major.

Teaching Minor: See the College of Education section of the catalog (Subject Matter Preparation for Secondary School Teachers) for 24-hour lists of teaching minors.

Office Management Major

Recommended Years

	Fr. So.	Jr. Sr.
General Education Requirements		
Religious Education	12	12
Physical Science (Classes in two depts.)	9	
Biological Science	8	
Social Science: Economics 101	5	
History 170	5	
Upper Division Elective		5
Humanities and Aesthetics: English Literature	6	
Upper Division Elective		9
English Composition	9	
Physical Education and Health	4	

Office Management—Option Three: Office Administration

Accounting 101 or 201, and 102 or 202	10	
Accounting 230 (Business Mathematics)	3	
Accounting 316 (Machine Accounting)	2	
Accounting 555 (Accounting Systems—recommended)		5
Bus. Mgt. 342 (Business Law)		5
Bus. Mgt. 347 (Principles of Marketing)		5
Bus. Mgt. 348 (Financial Administration)		5
Bus. Mgt. 480, 481 (Executive Lectures)		1-2
Economics 101 (Economic Principles)	5	
Economics 331 (Business Statistics)	5	
Off. Mgt. 102, 103, 104 (Production Typewriting)	2-6	

Off. Mgt. 106 (Calculating Machines)	2	
Off. Mgt. 220 (Business Communication)	3	
Off. Mgt. 305 (Prin. and Methods of Office Operation)		5
Off. Mgt. 320 (Business Writing and Reporting)	3	
Off. Mgt. 325 (Org. and Dict. of Bus. Com.)	2	
Off. Mgt. 470 (Records Control and Office Machines)	3	
Off. Mgt. 480 (Case Studies in Office Management)	3	
Off. Mgt. 485, 486 (Lectures in Office Administration)	1-2	
Office Management—Option Four: Executive Secretary		
Accounting 101 and 102	10	
Bus. Mgt. 342 (Business Law)		5
Bus. Mgt. 347 (Principles of Marketing)		5
Bus. Mgt. 348 (Financial Administration)		5
Bus. Mgt. 480, 481 (Executive Lectures)	1-2	
Economics 101 (Economic Principles)	5	
Economics 331 (Business Statistics)	5	
Off. Mgt. 101, 102 or equiv.; 103 and 104 req.	4-8	
Off. Mgt. 106 (Calculating Machines)	2	
Off. Mgt. 214 or equiv.; 311, 312 req. (Shorthand)	4	8
Off. Mgt. 220 (Business Communication)	3	
Off. Mgt. 305 (Prin. and Methods of Off. Oper.)		5
Off. Mgt. 320 (Business Writing and Reporting)		3
Off. Mgt. 470 (Records Control and Off. Mach.)		3
Off. Mgt. 475 (Directed Office Experience)		5
Off. Mgt. 485, 486 (Lectures on Off. Adm.)	1-2	

BUSINESS EDUCATION

Upper Division Courses

- 377 (120). Basic Classroom Procedures. (4:4:3) A.W.S. Staff**
For course description and fee see Education: Instruction 377.
- 468 (178). Fundamentals of Business Education. (3:3:0) S. Staff**
A course designed for an understanding of the fundamentals of business education.
- 478 (138). Unit Planning and Teaching. (4:3:5) A.W.S. Staff**
For course description and fee see Education: Instruction 478.
- 479 (139). Secondary Student Teaching. (7:1:20) A.W.S. Staff**
For course description and fee see Education: Instruction 479.

OFFICE MANAGEMENT

Lower Division Courses

- 101 (21). Fundamentals of Typewriting. (2:5:0) A.W.S. Staff**
Mastery of the keyboard and development of basic skills. Students with high school credit in typewriting are not permitted to take this course for college credit.
- 102 (22). Intermediate Typewriting. (2:5:0) A.W.S. Staff**
Development of speed and control, and an introduction to the arrangement of typewritten material.
- 103 (23). Speed Building in Typewriting Production Techniques. (2:5:0) A.W.S. Staff**
Prerequisite: a beginning speed of 40 words per minute.
Intensive drills with emphasis on measurement of speed and control in the production of manuscripts, outlines, minutes, tabulations, letter writing, rough drafts, and legal instruments.
- 104 (24). Advanced Production Techniques in Typewriting. (2:5:0) A.W.S. Staff**
Prerequisite: B.E.O.M. 103 and a minimum speed of 50 words per minute.

Application of advanced production techniques to practical business problems including statistical reports, office projects, editing, and composition.

- 106 (26). Calculating Machine.** (2:5:0) A.W.S. Staff
Instruction and training in the operation of key-driven calculators, ten-key adding and listing machines, and rotary-driven calculators.
- 111 (11). Beginning Shorthand.** (4:5:0) A.W.S. Staff
Study of the fundamentals of shorthand with emphasis on developing fluency in reading and writing from shorthand plates. Students with previous training in Gregg shorthand are not permitted to take this course for credit.
- 112 (12). Intermediate Shorthand.** (4:5:0) A.W.S. Staff
Review of shorthand fundamentals and an introduction in taking dictation of business correspondence.
- 113 (13). Shorthand Dictation.** (4:5:0) A.W.S. Staff
Development of shorthand writing and control, beginning with 60 words per minute with the objective of developing a rate of 70 to 90 words per minute on new material.
- 214 (14). Applied Stenography.** (4:5:0) A.W.S. Staff
Introduction to transcription through application of shorthand to business vocabularies. For students who write 80 words per minute on new material.
- 215 (15). Applied Stenography.** (4:5:0) A.W.S. Staff
Optional course designed for students who need to build their speed to 100 words per minute or above before taking Off. Mgt. 311. Not required for a major in this department.
- 220 (31). Business Communication.** (3:3:0) A.W.S. Prerequisite: English 111, 112, and 113; also English 211 if student is deficient in knowledge of practical business grammar. Staff
Study in current means of communication; experience in the composition of business letters.
- 275 (40). Basic Office Procedures.** (3:3:3) S. Staff
For those who do not plan to take Off Mgt. 470 and 475. Provides experience with inter-office communications, duplicating machines, filing and machine transcription. Not required for majors in this department.

Upper Division Courses

- 305 (New). Principles and Methods for Analyzing Office Operations.** (5:5:0) A. Staff
Introduction to problems of office management and tools and methods of problem solution. Areas of concentration include office standards and quality control, job analysis and work simplification, time studies and automation in office operations.
- 311 (151). Transcription.** (4:5:0) A.W.S. Staff
Places emphasis on rapidly transcribing mailable letters. Upon entering this course, students should be able to take dictation at 100 words per minute and typewrite at 50 words per minute.
- 312 (152). Advanced Transcription and Speedbuilding.** (4:5:0) A.S. Staff
Places emphasis on accurate and rapid shorthand production. For students who write 100 words per minute and who desire to increase their speed to 120 words per minute.
- 313 (153). Advanced Expert Shorthand.** (4:5:0) W. Staff
Expert shorthand speed course for students writing above 120 words per minute in making reports of committee meetings, board of director's meetings or conferences. Includes specialized vocabulary, testimony dictation, and Congressional Record material.
- 320 (110). Business Writing and Reporting.** (3:3:0) A.S. Prerequisite: Off. Mgt. 220. Staff

Intensive experience in communicating business analysis and results of fact-finding procedures.

- 325 (New). Organization and Dictation of Business Correspondence. (2:2:0) W. Staff**
 Actual experience in giving dictation of office correspondence and reports. Includes elements of thought processes and organization in preparing to give dictation. Machine dictation equipment will be available.
- 418 (184). Advanced Secretarial Training Review. (4:5:0) S. Staff**
 Intensive concentrated skills course for last-quarter seniors and others desiring to pass Civil Service, F.B.I., merit, and other examinations immediately preceding employment.
- 470 (154). Records Control and Office Machines. (3:3:3) A.W.S. Prerequisite: Off. Mgt. 104 or equivalent. Staff**
 A course dealing with fundamentals of filing, machine transcription, duplicating machines, other office equipment and supplies.
- 475 (155). Directed Office Experience. (5:5:5) A.W.S. Prerequisites: Off. Mgt. 311 and 470 or equivalent; shorthand speed of 100; typing speed of 60. Staff**
- 480 (160). Case Studies in Office Management. (3:3:0) W. Staff**
 Extensive use of cases in office management. Student analysis, group discussions, and written reports will form principal basis for conduct of course.
- 485, 486 (New). Lectures in Office Administration. (1:1:0 ea.) 485 given in even-numbered years; 486 given in odd-numbered years. Staff**

Graduate Courses

- 630. Current Developments Influencing the Content of Business Education. (3:3:0) A. Staff**
 A presentation of recent technological developments such as automation in business and an analysis of the influence on the content and procedures of business education.
- 635. Recent Changes in the Materials and Methods of Business Education. (3:3:0) W. Staff**
 Investigation of recent developments in materials and methods in the teaching of business subjects in the secondary school and junior college. Open to those who have had teaching experience.
- 640. Trends of Thought in Business Education. (3:3:0) S. Staff**
 Fundamental ideas that have shaped the business curriculum in the United States and basic issues that have affected purposes, trends, and control of business education in public and private institutions.
- 665. Practicum in Business Education. (3:3:0) W. Staff**
 The planning and development of practical and creative projects in the field of business education, individually or in groups. Experienced teachers will be permitted to use actual school problems and projects as a nucleus for the term's work.
- 670. Cooperative Business Experience Workshop. (6:6:6) S. Staff**
 Through the cooperation of business and industry in Utah, Salt Lake, Davis, and Weber Counties this work-education program is offered to graduate business teachers. This blending of business-community experience and campus classwork will strengthen in the teacher an awareness of the benefits of free enterprise and reveal business problems and practices related to teaching business subjects.

These courses also count in Business Education and Office Management:
Accounting 316. Machine Accounting. (2:2:0)
Accounting 555. Accounting Systems, Procedures and Methods. (5:5:0)
Bus. Mgt. 480, 481. Executive Lectures. (1:1:0)

Business Management*

Professors: C. S. Boyle (emeritus), H. R. Clark, H. D. Lowe, R. L. Smith, W. J. Taylor.

Associate Professors: C. L. Oaks (chairman, 159 N.).

Instructors: S. R. Covey, M. C. Faux, M. L. Wilson, Jr.

The primary objective of this department is to prepare students for professional careers in business management. The courses of study and methods of instruction are designed to develop in each student personal qualities which will enable him to realize his full potentialities as an effective administrator. Stress is placed upon the development of such qualities as facility in the use of analytical tools and techniques, the art of decision making, and the ability to communicate effectively.

Students planning to major in this department should complete in the time sequence indicated the following general education, college and departmental core requirements. Subsequent to the completion of these general education and core requirements, a student can elect any one of four different concentrations—Business Administration, Business Management, Finance and Banking, Industrial Management, or Marketing—as outlined below.

GENERAL EDUCATION

(Freshman Through Senior Years)

See "Requirements for Graduation" section of this catalog for courses needed to satisfy the General Education requirements of the University. A detailed discussion of courses which can be taken in each required area is listed therein.

COLLEGE AND DEPARTMENTAL CORE

Freshman and Sophomore Years		Hours
Economics 111	Economic Principles and Problems (or equivalent)	5
Accounting 230, 231	Mathematics of Business	6
Accounting 201, 202 (or 101, 102)	Elementary Accounting	10
Bus. Mgt. 203	Managerial Accounting and Control	5

Junior Year		Hours
Economics 331	Business Statistics	5
Economics 345	Intermediate Economic Theory	5
Bus. Mgt. 340	Industrial Organization and Management	5
Bus. Mgt. 342	An Introduction to Commercial Law	5
Bus. Mgt. 347	Principles of Marketing	5
Bus. Mgt. 348	Financial Administration	5

Senior Year		Hours
Bus. Mgt. 420	Human Relations in Administration I	5
Bus. Mgt. 480 or 481	Executive Lectures	1

BUSINESS ADMINISTRATION CONCENTRATION

The business administration course is designed to integrate the various areas included in the department curriculum and consequently, to give exceptional stu-

*The three departments of Finance and Banking, Industrial Management, and Marketing have been combined to form a single department of Business Management.

dents a broad background in management training at the undergraduate level. Particular emphasis will be placed upon the use of the case method. Requirements for concentration in this area include Business Management 588 and 589, and at least 18 hours from at least 2 of the following 3 areas. Business Management 421 (Human Relations II) can also be included as part of the 18 hours, but will not be counted as one of the two areas.

Finance and Banking Area:		Hours
Bus. Mgt. 451	Investments	5
Bus. Mgt. 452	Corporation Finance	5
Bus. Mgt. 571	Management of Financial Institutions	3
Bus. Mgt. 574	Investment Management	3
Bus. Mgt. 577	Modern Corporate Problems	3
Industrial Management Area:		Hours
Bus. Mgt. 469	Personnel Management	5
Bus. Mgt. 460 and 461	Problems in Production	10
Bus. Mgt. 460 and 473	Problems in Production and Industrial Quality Control	8
Bus. Mgt. 460 and 474	Problems in Production and Management of Production Facilities	8
Marketing Area:		Hours
Bus. Mgt. 479	Problems in Marketing	5
Bus. Mgt. 555	Problems in Advertising	5
Bus. Mgt. 556	Problems in Retail Store Mgt.	5
Bus. Mgt. 557	Problems in Sales Mgt.	5

FINANCE AND BANKING CONCENTRATION

The course work offered in this area is designed, first, to familiarize business students with the elements of sound finance and, second, to provide specialized work for those who seek positions of management and executive responsibility in financial institutions or the financial departments of business firms. The requirements are flexible enough to allow some specialization directed toward commercial banking, investment banking, business finance, insurance, real estate, or investment management.

Students electing to concentrate in this area of the Department of Business Management are required to take a minimum of four courses in Group A and a minimum of two courses in Group B.

Group A.		Hours
Bus. Mgt. 450	General Insurance	5
Bus. Mgt. 451	Investments	5
Bus. Mgt. 452	Corporation Finance	5
Economics 453	Money and Banking	5
Bus. Mgt. 454	Real Estate	5
Group B.		Hours
Bus. Mgt. 565	Life Insurance	3
Bus. Mgt. 566	Property and Casualty Insurance.	3
Bus. Mgt. 567	Real Estate Admin.	3
Bus. Mgt. 571	Management of Financial Institutions	3
Bus. Mgt. 574	Investment Management	3
Bus. Mgt. 577	Modern Corporate Problems	3

INDUSTRIAL MANAGEMENT CONCENTRATION

The industrial management concentration provides training for positions in industrial engineering, production control, quality control, purchasing, industrial relations, and the operating departments of industrial enterprises. In addition, it facilitates entry into executive trainee programs, the active management of

small business, or the continuation of training in a graduate school of business.

Students electing a concentration in industrial management will take the basic course outlined below and an emphasis in either production or industrial relations.

Basic Course:

Drawing 102	Blueprint Reading (to be taken during Jr. year)	3
Bus. Mgt. 460	Manufacturing Processes	5
Bus. Mgt. 461	Manpower Management	5
Bus. Mgt. 462	Production Control	5
Bus. Mgt. 588,	589 Problems in Business Management	4,4

Production Emphasis:

Bus. Mgt. 473	Industrial Quality Control	3
Bus. Mgt. 474	Management of Production Facilities	3

Industrial Relations Emphasis:

Bus. Mgt. 469	Personnel Management	5
Economics 461	Labor Problems (highly recommended)	3

MARKETING CONCENTRATION

The marketing course is designed to prepare students for positions of management and executive responsibility in the fields of industrial marketing, retailing, wholesaling, advertising, sales management, and market research. Requirements for a concentration in this area include three of the four courses in Group A, Business Management 479 (Problems in Marketing), and at least one course in Group B.

Group A.

Group A.	Hours
Bus. Mgt. 455 Advertising	5
Bus. Mgt. 456 Retailing	5
Bus. Mgt. 457 Wholesaling and Industrial Marketing	5
Bus. Mgt. 458 Market Research	5

Group B.

Bus. Mgt. 555	Problems in Advertising	5
Bus. Mgt. 556	Problems in Retail Store Management	5
Bus. Mgt. 557	Problems in Sales Management	5

*The references to previous course numbers in parentheses after each present course number include an indication of the department in which the course was previously offered, i.e. F.&B., Finance and Banking; I.M., Industrial Management and M., Marketing.

Lower Division Courses

203 (I.M. 120). Managerial Accounting and Control. (5:5:0) A.W.S. Prerequisites: Accounting 102 or 202, and 230. (Acct. 230 may be taken concurrently.)

Wilson, Faux

Third in a three-quarter series for Business Management majors. During the sophomore year, business management students should take the following accounting series: Accounting 101 or 201, Accounting 102 or 202, and Business Management 203.

The first course emphasizes basic accounting concepts. The second course stresses the analysis and interpretation of financial statements and the development and use of cost information. The third course stresses the understanding and use of accounting data for decision-making purposes with emphasis on the measurement of performance and relevant cost concepts.

205 (M. 151). Personal Finance. (3:3:0) A.W.

Staff

A practical course in money management with particular reference to utilization of savings.

Upper Division Courses

- 315 (New). Principles of Salesmanship.** (2:2:0) A.S. Staff
A critical review of techniques involved in creative sales, with emphasis upon their psychological and economic foundations.
- 340 (I.M. 130). Industrial Organization and Management.** (5:5:0) A.W.S. Pre-requisites: commerce students—Accounting 230, Economics 331, and Business Management 203; engineering students—Mathematics 111 or permission of instructor. Faux, Wilson, Bushnell
Introduction to the producing function of business. Plant location and layout, machinery and equipment utilization, employee-employer relations, and industrial control.
- 342 (F.&B. 154). An Introduction to Commercial Law.** (5:5:0) A.W.S. Taylor, Nelson
Survey of modern American business law as it applies to everyday life and experiences of the citizen.
- 347 (M. 107). Principles of Marketing.** (5:5:0) A.W.S. Staff
Analytical survey of institutions, functions, problems, and policies in the distribution of goods from producer to consumer. Includes treatment of pricing and governmental regulation.
- 348 (F.&B. 151). Financial Administration.** (5:5:0) A.W.S. Prerequisite: Business Management 203. Clark, Lowe
Introduction to principles governing financial administration of business enterprises.
- 367 (New). Industrial Purchasing.** (3:3:0) S. Staff
Analysis of techniques involved in procurement of materials, equipment and supplies. Attention also given to purchasing associations, legal aspects of purchasing, and traffic as related to purchasing.
- 420 (M. 108). Human Relations in Administration I.** (5:5:0) A.W.S. Recommended for seniors only. Covey, Faux
Case problems involving communication processes, face to face relationships, and the securing of cooperation are discussed to develop a way of understanding self and others.
- 421 (I.M. 169). Human Relations in Administration II.** (4:4:0) W.S. Prerequisite: Business Management 420. Covey
An illuminating conceptual framework for understanding group processes is developed to identify factors contributing to understanding, growth, and cooperation in group work and leadership.
- 450 (F.&B. 155). General Insurance.** (5:5:0) A. Prerequisite: Business Management 348 or equivalent. Jensen
Life, health, accident, fire, property, and liability insurance and principles of risk-bearing as they apply to each classification of the insurance field.
- 451 (F.&B. 254). Investments.** (5:5:0) A. Prerequisite: Business Management 348 or equivalent. Lowe
Analysis of operating and financial characteristics of industrial, public utility, railroad, financial, and real estate enterprises, and various federal, state and municipal bodies.
- 452 (F.&B. 152). Corporation Finance.** (5:5:0) W. Prerequisite: Business Management 348. Clark
Financial problems connected with organization of corporations, underwriting and sale of securities, and management, expansion, and organization of those that are not successful.
- 454 (F.&B. 156). Real Estate and Urban Land Economics.** (5:5:0) W. Prerequisite: Business Management 348 or equivalent. Lowe

Study of forces of demand and factors of supply of urban land, problems of the building industry, real estate credit, rents and prices, and city growth and structure.

- 455 (M. 159). **Advertising.** (5:5:0) A.S. Prerequisite Business Management 347. Staff
Analysis of preparation, program, planning, media, budgeting and research. Utilization by business emphasized, but attention also given to advertising institutions and to economic and social aspects.
- 456 (M. 158). **Retailing.** (5:5:0) W.S. Prerequisite: Business Management 347. Staff
Survey of retail store operation from point of view of executive control, profit planning, merchandising, store location, layout, organization, policies, system, and coordination of store activities.
- 457 (New). **Wholesaling and Industrial Marketing.** (5:5:0) W. Prerequisite: Business Management 347. Staff
A study of principles, practices, and policies of business concerns engaged in movement of goods from manufacturer to retailer and from manufacturer to industrial user.
- 458 (M. 285). **Marketing Research.** (5:5:0) A.W. Prerequisite: Business Management 347. Staff
Uses, methods, and techniques of marketing research.
- 460 (I.M. 150). **Problems in Production—Manufacturing Processes.** (5:6:0) A. Prerequisites: Accounting 101, 102, or 201, 202 and 230; Drawing 102; Economics 101, 331 and 345; Business Management 203, 340, 347 and 348. Wilson
Part one of a one-year course dealing with problems encountered by production personnel; casting, forming and machining of metals and plastics. Utilizes business cases, films and field trips.
- 461 (I.M. 151). **Problems in Production—Manpower Management.** (5:6:0) W. Prerequisite: Business Management 460. Wilson
Part two of a one-year series. Methods analysis, time studies, wage determination and administration.
- 462 (I.M. 152). **Problems in Production—Production Control.** (5:6:0) S. Prerequisite: Business Management 461. Wilson
Part three of a one-year series. Product design, materials handling and control, process analysis, plant layout, and production control.
- 469 (I.M. 160). **Personnel Management.** (5:5:0) W. Prerequisite: Business Management 340 or permission of the instructor. Faux
Management of the personnel function: job evaluation, organization planning, employee selection, training, compensation, morale, labor relations and management development. Method: case analysis and research projects.
- 473 (New). **Industrial Quality Control.** (3:4:0) A. Prerequisites: Accounting 230, Economics 331, Business Management 340, or equivalent. Wilson
Emphasizes the organization and administration of a quality control program, including the application of mathematical and statistical techniques to problems in industrial quality control. Meets for two consecutive hours, two days per week.
- 474 (I.M. New). **Management of Production Facilities.** (3:4:0) W. Prerequisites: Business Management 203 and 460. Wilson
The economics of equipment utilization and replacement, capital budgeting, maintenance control, and tools control. Meets for two consecutive hours, two days per week.
- 475 (I.M. New). **Advanced Production Methods.** (3:4:0) S. Prerequisites: Business Management 461. Wilson

Advanced methods work, automation, and the application of data processing to industrial operations. Meets for two consecutive hours, two days per week.

- 476 (I.M. New). **Industrial Planning and Forecasting.** (3:3:0) A. By departmental approval only. Staff
Top management policy determination in the areas of production planning, planning of physical facilities, and organization planning as they are related to market and economic forecasts.
- 479 (M. 157). **Problems in Marketing.** (5:5:0) A.W. Prerequisite: Business Management 347. Staff
Analysis of problems in marketing management with particular emphasis upon integrating the various functional areas.
- 480, 481 (M. 170, 171). **Executive Lectures.** (1:2:0 ea.) S. Staff
Top executives from throughout the nation visit the campus and meet students in a series of lectures dealing with subjects significant to executive leadership.
- 485 (I.M. 185). **Industry Analysis.** (5:5:0) S. Prerequisites: Business Management 460 and 588. Staff
Production characteristics of major industries. Large business units are studied in terms of sources of raw materials, production techniques, financial structure, degree of integration, stage of maturity, character of mechanization, government regulation, and possible future developments.

Advanced Undergraduate or Graduate Courses

- 555 (New). **Problems in Advertising.** (5:5:0) W. Prerequisite: Business Management 455 or consent of instructor. Staff
Problems in the use of advertising as a part of management's overall marketing strategy. Stresses planning, coordination, control, and evaluation of effectiveness.
- 556 (M. 205). **Problems in Retail Store Management.** (5:5:0) S. Prerequisite: Business Management 456 or consent of instructor. Staff
Problems involved in policy formulation and implementation and in the coordination of store activities through the use of controls and standards.
- 557 (M. 165). **Problems in Sales Management.** (5:5:0) A.S. Staff
Problems in sales organization, management of sales force (selection, training, compensation, and supervision), sales methods, and sales planning and control.
- 558, 559 (M. 204, 206). **Advanced Problems in Marketing Research.** (Arr.) A.W.S. Prerequisite: Business Management 458 and consent of instructor. Staff
Advanced methods of research and their application to marketing problems.
- 565 (F. & B. New). **Life Insurance.** (3:3:0) W. Prerequisite: Business Management 450. Jensen
Advanced study of the nature and functions of life insurance and its application to personal and business needs.
- 566 (F.&B. New). **Property and Casualty Insurance.** (3:3:0) S. Prerequisite: Business Management 450. Staff
Advanced study of the functions of fire and marine insurance, casualty insurance, and corporate building.
- 567 (F.&B. New). **Real Estate Administration.** (3:3:0) S. Prerequisite: Business Management 454. Lowe
Mechanisms of real estate finance. Principles of mortgage risk analysis, role of government agencies, and problems of property development.

- 571 (F.&B. New). Management of Financial Institutions. (3:3:0) A. Lowe
Study of asset management of various types of financial institutions with special emphasis on loan policies and related problems.
- 574 (F.&B. New). Investment Management. (3:3:0) W. Lowe
Theory of investment management and its application in formulation of investment policies for different types of investors.
- 577 (F.&B. New). Modern Corporate Problems. (3:3:0) S. Lowe
Problems arising from separation of ownership and control, changing theory of profits and property, changing methods of financing expansion and other current problems.
- 588, 589 (I.M. 190, 191, 192). Problems in Business Management. (4:4:0 ea.)
W.S. Limited to seniors in the College of Commerce. Faux
An integrating case course extending over two quarters in which marketing, production, finance, control, economic, and human issues are considered simultaneously in developing realistic analyses, decisions, and plans of action. Extensive use of business cases requiring student analysis, group discussions, and written reports form the basis for the conduct of the course.
- 699 (New). Thesis for Master's Degree. (Arr.) Staff

Business Program

(Pre-graduate)

(See College of Commerce.)

Chemical Engineering Science

Associate Professor: B. Brown (chairman, 222 ESC).

Assistant Professors: J. J. Christensen, W. H. Wiser.

Students majoring in chemical engineering science may anticipate receiving a thorough education in the fundamental physical sciences as well as in engineering. This training will enable the student upon graduation to enter any of the numerous academic or industrial fields which are open to persons having this broad educational background.

Entrance Requirements

For special entrance requirements into the College of Physic and Engineering Sciences, see that section of this catalog. Attention is called especially to the college entrance requirements in mathematics and to the possibility of substituting air science credit for general education credit in the five-year engineering program.

Scholarship Requirements

A student must have earned an average grade of "C" in sophomore physics and calculus before registering for junior engineering classes.

Graduation Requirements

Besides satisfying the general education requirements found on page 76, a degree in chemical engineering science requires the completion of a minimum of 245 credits, of which at least 170 shall be chosen from the physical science group. Of these, at least 45 should be in chemistry, 40 in chemical engineering and 25 in other engineering areas. No more than 6 credits of "D" grade in the major field may be applied toward graduation.

Additional Degree in Chemistry

There is considerable merit in obtaining a B.S. degree in chemistry at the end of the fourth year. This the student can accomplish by suitably rearranging the suggested schedule to fulfill the general education requirements earlier, by completing the additional requirements in chemistry as listed on page 202, and by declaring himself a chemistry major during his fourth year.

Suggested Curriculum for Chemical Engineering Major

First Year				Third Year			
	A	W	S		A	W	S
Chem. 111, 112, 113	5	5	5	Chem. 351, 352	5	4	
*Math. 111, 112, 231	5	5	5	Ch. E. 371, 372, 373	2	2	2
English 111, 112, 113	3	3	3	C. E. 201, 202, 203	3	3	3
Physical Education	1	1	1	E. E. 301, 302, 303	4	4	4
Health 130			2	Religion	2	2	2
Religion	2	2	2	Group requirements			5
M.E. 100		1		Total Hours	16	15	16
Total Hours	16	17	18				
Second Year				Fourth Year			
	A	W	S		A	W	S
Math. 232, 233, 234	5	5	5	Chem. 361, 362, 363	4	4	4
Physics 211, 212, 213	5	5	5	Chem. E. 471, 472, 473	3	3	3
Chem. 221	5			C. E. 301, 303	4		5
Religion	2	2	2	Chem. 591	2		
Group requirements		5	5	Math. 316		3	
Total Hours	17	17	17	Chem. 378, 379		2	2
				Religion	2	2	2
				Group Requirements	3	3	
				Total Hours	18	17	16

Fifth Year							
			A	W	S		
Ch. E. 571.	572.	573	3	3	3	Chem. 561	4
Ch. E. 575.	576.	577	2	2	2	Ch. E. 574	3
Ch. E. 579					3	Chem. E. 599	1 1 3
						Group Requirements	5 7 5
						Total Hours	15 16 16

*Students having had high school trigonometry may take Mathematics 112 by examination. Mathematics 111 may be satisfied in similar manner. Students not qualified to take Mathematics 111 must take Mathematics 91 and/or 101.

Upper Division Courses

- 371, 372, 373 (Chem. 114, 115, 116). Chemical Engineering Fundamentals.** (2:2:0 ea.) A.W.S. Prerequisite: Physics 212. Concurrent: Chemistry 221 or 351. Brown
- 378, 379 (Chem. 177, 178). Engineering Materials.** (2:2:0 ea.) A.W. and W.S. Prerequisite: Chemistry 107 or 112. Staff
Study of chemistry and application of metals and plastic materials in engineering.
- 471 (Chem. 166). Chemical Engineering Fluid Dynamics.** (3:3:0) A. Prerequisite: Chemistry 371 or 461. Christensen
- 472 (Chem. 165). Chemical Engineering Thermodynamics and Unit Operations.** (3:3:0) W. Prerequisites: Chemistry 461, Mathematics 234. Christensen
First and Second Laws of Thermodynamics and their applications; behavior of real gasses, thermodynamics potential functions, phase equilibria, chemical equilibrium.
- 473 (Chem. 167). Chemical Engineering Heat and Mass Transfer.** (3:3:0) S. Prerequisite: Chemistry 472 or equivalent. Christensen
A study of heat and mass transfer phenomena as they apply to chemical engineering equipment design.
- 474 (Chem. 179). Chemical Engineering Process Principles.** (3:3:0) S. Brown
A study of industrial chemical processes.

Advanced Undergraduate or Graduate Courses

- 571, 572, 573 (Chem. 171, 172, 173). Chemical Engineering Unit Operations.** (3:3:0 ea.) A.W.S. Prerequisite: Chemistry 471. Wisner
Distillation, evaporation, absorption, extraction, drying, psychrometry, sedimentation, filtration, crushing, screening.
- 574 (Chem. 196). Principles of Chemical Plant Design.** (2:1:0) W. Brown
- 575, 576, 577 (Chem. 174, 175, 176). Unit Operations Laboratory.** (2:0:4 ea.) A.W.S. Staff
- 578 (New). Nuclear Engineering.** (3:3:0) W. Prerequisite: Ch. E. 471. Brown
The application of the principles of atomic physics to the design and operation of nuclear reactors; shielding; fuel preparation and separation.
- 579 (New). Chemical Engineering Kinetics.** (3:3:0) S. Prerequisite: Ch. E. 472 and 473. Christensen
Kinetics of chemical reactions with special emphasis on the application of the principles to engineering design of reactors.
- 597 (Chem. 197). Special Problems.** (Arr.) Registration by permission. Staff
- 599 (Chem. 200). Chemical Engineering Undergraduate Thesis.** (Arr.) Registration by permission. Staff

Chemistry

Professors: Broadbent, Bryner, Goates, Hall, J. K. Nicholes.

Associate Professors: K. P. Anderson (chairman 124 ESC), Blackham, K. L. Nelson, H. W. Peterson, A. D. Swenson, Vernon.

Assistant Professors: Butler, Izatt, Snow, Wing.

Superintendent of Laboratories and Stores: Meibos.

The objectives of the Department of Chemistry are as follows: (1) to be of service to other departments of the University by offering courses in general education for all students and additional fundamental background training for majors in physical and engineering sciences, biological and agricultural sciences, nursing, family living, pre-medicine, pre-dentistry, and other areas. (2) to provide sound, thorough training in chemistry for students choosing to major in this area. (3) to contribute significantly to the sum of basic research in chemistry being carried out in the universities of the world.

The Department offers four beginning programs in chemistry. The first three are terminal programs: Chemistry 100 for students interested in chemistry for a liberal arts education only; Chemistry 101, 102, 103, and 104 for students in nursing, home economics, and general biology or agriculture; Chemistry 105, 106, and 107 for engineering students (except chemical engineering students); and Chemistry 111, 112, and 113 for chemistry and chemical engineering majors and all others desiring a strong foundation for subsequent extensive study of chemistry such as may be required in physics, biological sciences, medicine, dentistry, and the teaching of science.

A major in chemistry shall consist of a minimum of 63 hours credit among which credit in each of the following courses is required: Chemistry 111, 112, 113, 221, 322, 351 (5 hours), 352 (5 hours), 353 (5 hours), 461, 462, 463, 591, and 592. The remainder of the credit required may be obtained by taking any other upper division chemistry courses. It is recommended, however, that the additional courses be taken from the following list: Chemistry 400, 414, 504, 551, 581, 582, 583, and 593. The student who desires to be certified to the American Chemical Society upon graduation should consult his adviser for details. No more than ten hours of D credit in chemistry will be counted in meeting the requirements for the major. Credit in Chemistry 100, 101, 102, 103, 104, 105, 106, 107, 220, and 284, all designed as service courses for students in other areas, will not be counted as applying toward a major in chemistry.

A major in pre-medical and pre-dental chemistry shall consist of a minimum of 45 hours credit in courses selected from the following list: Chemistry 111, 112, 113, 221, 351, 352, 353, 461, 462, 463.

The student who desires to teach chemistry on the secondary level may major in either chemistry or secondary education with a composite teaching major. In the former case he should consult the requirements for teacher certification presented in the College of Education section of this catalog. In the latter case he should consult the lists of composite teaching majors to be found in the same place.

For special entrance requirements into the College of Physical and Engineering Sciences, see page 138 of this catalog. Attention is called especially to the college entrance requirements in mathematics and to the possibility of substituting air science credit for general education credit.

For details concerning the program for graduate study leading to the M.S. and Ph.D. degrees in chemistry the student should consult the Graduate Catalog.

Note that the following curricula are only "suggested." Alterations may be made with the approval of the student's adviser so long as the program does not depart from the minimum requirements for the major and a minor.

Suggested Curriculum for Chemistry Major

Freshman Year				Sophomore Year			
	A	W	S		A	W	S
Chem. 111, 112, 113	5	5	5	Chem. 221, 322, 414	5	5	5
Math. 111, 112, 231	5	5	5	Math. 232, 233, 234	5	5	5
English 111, 112, 113	3	3	3	Physics 211, 212, 213	5	5	5
Physical Education	1	1	1	Religion	2	2	2
Health 130				Elective	2	2	2
Religion	2	2	2				
Elective	2	2		Total Hours	19	19	19
Total Hours	18	18	18				
Junior Year				Senior Year			
	A	W	S		A	W	S
Chem. 351, 352, 353	5	5	5	Chem. 461, 462, 463	4	4	4
Math. 334, 335	3	3		Chem. 591, 592, 593	2	2	2
Biological Science	5	3		History 170		5	
Humanities & Aesthetics ..			3	Social Science	5		5
German 101, 102, 103	5	5	5	German 307, 308, 309	3	3	3
Religion		2	3	Religion	3	2	2
Elective	2	2		Elective	1	2	2
Total Hours	18	18	18	Total Hours	18	18	18

(The foregoing outline presumes that advantage will be taken of the opportunity to apply six hours of "double credit" in simultaneously meeting the requirement of both religion and humanities and aesthetics.)

Lower Division Courses

- 100 (1). **Elementary College Chemistry.** (3:3:0) A.W.S. (G-PS) Staff
For students seeking only a liberal arts education in chemistry. Those who have had high school chemistry should register in Chemistry 111.
- 101 (2). **Introductory General Chemistry.** (5:5:4) A. (G-PS) Staff
For students in nursing, family living, general biology and agriculture.
- 102 (3). **Introductory Organic Chemistry.** (4-5:4:2-4) W. (G-PS) Prerequisite: Chemistry 100 or 101. Staff
A continuation of Chemistry 101.
- 103 (4). **Introductory Biochemistry.** (3:3:2) S. Prerequisite: Chemistry 102. Staff
- 104 (New). **Introductory Inorganic Chemistry.** (5:5:4) W. Prerequisite: Chemistry 101 or 105 or 111. Staff
Designed primarily for those students in Chemistry 101 who require more inorganic chemistry than provided by that course.
- 105, 106, 107 (New). **General College Chemistry.** (4:4:2 ea.) A.W.S. (†G-PS) Prerequisite: Mathematics 101 or concurrent registration. Staff
A terminal course in chemistry designed for engineering and other technical areas. It lays more stress on practical applications than Chemistry 111, 112, 113.
- 111 (14). **Principles of Chemistry.** (5:7:0) A.W. (†G-PS) Prerequisites: Mathematics 111 or its equivalent or concurrent registration and high school chemistry of physics or Chemistry 100. Staff
A non-terminal course in fundamental principles for those who plan to continue their study of chemistry beyond the freshman year.
- 112 (15). **Principles of Chemistry.** (5:3:6) W.S. (†G-PS) Prerequisite: Chemistry 111. Staff
- 113 (16). **Principles of Chemistry and Qualitative Inorganic Analysis.** (5:3:6) Prerequisite: Chemistry 112. Staff
- 220 (23). **Elements of Quantitative Analysis.** (4-5:3:3-6) S. Prerequisite: Chemistry 103 or 107 or 113. Butler, Wing

Quantitative analysis adapted to the needs of students in medical technology and of others interested in biological and food materials.

- 221 (31). Quantitative Analysis. (5:3:6) A.W. Prerequisites: Chemistry 113 and Mathematics 111. Butler, Wing
For science and engineering majors.
- 228 (136). Fire Assaying. (3:2:4) S. Prerequisite: Chemistry 113. Wing
- 284 (110). Introductory Physiological Chemistry. (5:3:4) S. Prerequisite: Chemistry 102 or 107. Vernon

Upper Division Courses

- 322 (132). Quantitative Analysis. (5:3:6) W.S. Prerequisite: Chemistry 221. Butler, Wing
- 324 (125). Fuels and Fuel Analysis. (2:1:3) S. Wing
A study of the important fuels used in industry. Experimental methods of analysis of fuels.
- 351, 352, 353 (151, 152, 153). Organic Chemistry. (4-5:3:3-6 ea.) A.W.S. Prerequisites: Chemistry 113, 221. Blackham, Broadbent, Nelson
For science and engineering majors.
- 400 (101). Methods of Glass Manipulation. (1:0:4) A.W.S. Bryner
Exercises in glass working. Registration by permission of instructor.
- 414 (111). Inorganic Chemistry. (5:5:0) A.S. Prerequisite: Chemistry 221. Izatt
- 461, 462, 463 (161, 162, 163). Physical Chemistry. (4:3:3 ea.) A.W.S. Prerequisites: Chemistry 221, Physics 213, Mathematics 234. Bryner, Anderson
For science and engineering majors.

Advanced Undergraduate or Graduate Courses

- 503 (New). Research Laboratory Techniques. (1:3:0) A. Staff
- 504 (237). Instrumental Analysis. (2-3:2:3-6) S. Butler, Goates
Theory and technique in spectrophotometry, electrometric titration methods, radiochemistry, mass spectrography, etc.
- 508 (290). *History of Chemistry. (3:3:0) S. Offered 1958-59. Nicholes
- 524 (222). *Quantitative Microanalysis. (3:1:6) W. Offered 1959-60. Wing
- 551 (251). Qualitative Organic Analysis. (3-4:2:3-6) A. Blackham, Broadbent, Nelson
Systematic identification of organic compounds singly and in mixtures.
- 580 (New). Metabolic Processes. (2:2:0) S. Swensen, Vernon
For non-biochemistry majors only. Provides an insight into the important area of biochemistry for those who will not otherwise contact it.
- 581, 582, 583 (181, 182, 183). Biochemistry. (5:3:6 ea.) A.W.S. Prerequisites: Chemistry 221, 353. Swensen, Vernon
A general treatment of the chemistry of substances and processes of biological significance.
- 591, 592, 593 (191, 192, 193). Chemical Literature and Scientific Writing. (2:1:3 ea.) A.W.S. Broadbent, Nelson
Introduction to use of both primary and secondary sources, techniques for searching chemical literature, technical report writing, reviews.
- 597 (197). Special Problems. (Arr.) Registration by permission. Staff

Graduate Courses

- 601 (New). Geometry of Atoms and Molecules. (5:5:0) A. Blackham, Broadbent, Nelson
- 611 (211). Systematic Inorganic Chemistry. (3:3:0) W. Bryner, Izatt, Nicholes, Peterson
- 612 (New). *Chemistry of the Non-Metals. (3:3:0) S. Offered 1959-60. Izatt, Nicholes
- 618 (213). *Inorganic Syntheses. (3:0:9) S. Offered 1959-60. Izatt
- 621 (221). Advanced Analytical Chemistry. (3:3:0) S. Butler
- 652, 653 (252, 253). Advanced Organic Chemistry. (3:3:0) W.S. Blackham, Broadbent, Nelson
- 658 (254). Organic Syntheses. (4:2:6) W. Blackham, Broadbent, Nelson
- 661, 662 (261, 262). Chemical Thermodynamics. (3:3:0) A.W. Anderson, Hall, Goates, Snow
- 663 (New). Reaction Kinetics. (3:3:0) S. Anderson, Hall, Goates, Snow
- 681 (New). *Carbohydrate Metabolism. (3:3:0) A. Offered 1958-59. Swensen, Vernon
- 682 (New). *Biochemistry of Amino Acids and Proteins. (3:3:0) W. Offered 1958-59. Swensen, Vernon
- 683 (New). *Biochemistry of Lipids. (3:3:0) S. Offered in 1958-59. Swensen, Vernon
- 688 (New). Biochemical Preparations. (2:0:6) A.W.S. Swensen, Vernon
- 697 (297). Master's Candidate Research. (Arr.) Staff
- 699 (300). Thesis for Master's Degree. (Arr.) Staff
- 711 (New). *Coordination Compounds. (3:3:0) A. Offered 1958-59. Izatt
- 719 (New). Selected Topics in Inorganic Chemistry. (3:3:0) A. Staff
- 725, 726 (New). *Electro-analytical Chemistry. (3:3:0 ea.) A.W. Offered 1958-59. Butler
- 729 (New). Selected Topics in Analytical Chemistry. (3:3:0) S. Staff
- 751 (New). Mechanisms of Organic Reactions. (5:5:0) A. Blackham, Broadbent, Nelson
- 757 (New). *Chemistry of Natural Products. (3:3:0) S. Offered 1958-59. Broadbent, Vernon
- 758 (New). *Heterocyclic Compounds. (3:3:0) W. Offered 1959-60. Broadbent
- 759 (New). Selected Topics in Organic Chemistry. (3:3:0) Staff
- 761, 762, 763 (New). *Statistical Mechanics. (3:3:0 ea.) A.W.S. Offered 1958-59. Snow
- 764 (264). *Nuclear and Radiochemistry. (3:3:0) S. Offered 1959-60. Anderson
- 765, 766, 767 (New). *Quantum Chemistry. (3:3:0 ea.) A.W.S. Offered 1959-60. Snow
- 769 (New). Selected Topics in Physical Chemistry. (3:3:0) S. Staff
- 781 (283). *Enzyme Chemistry. (3-5:3:0-6) A. Offered 1959-60. Swensen, Vernon
- 782 (New). *Biological Oxidations. (3:3:0) W. Offered 1959-60. Vernon
- 789 (New). Selected Topics in Biochemistry. (3:3:0) S. Staff
- 797 (New). Doctoral Candidate Research. (Arr.) Staff
- 799 (New). Dissertation for the Ph.D. Degree. (Arr.) Staff

*Offered in alternate years only.

Civil Engineering Science

Professors: Hodson (chairman, 198 ELB), Fuhrman.

Associate Professors: Firmage, Rollins.

Instructors: Calder, Perry.

Students entering the department are required to follow specified courses which have been planned to provide a broad training in all basic aspects of civil and structural engineering. The qualifications obtainable are applicable in such closely related technical fields as applied mechanics, architectural engineering, etc.

Entrance Requirements

These include both the general entrance requirements of the University and the particular requirements specified for the College of Physical and Engineering Sciences. Students are urged to include trigonometry and intermediate algebra in high school courses. Where evidence of student training in mathematics and English is available and is confirmed by entrance examination, a total of thirteen credit hours may be rebated in the First Year program listed below.

Graduation Requirements

The degree of Bachelor of Engineering Science may be obtained by completing the program specified below. Major and minor academic requirements are automatically satisfied by completion of the course specified.

Students who are majoring in and who complete the course in engineering science together with requirements for an air science commission are not subject to the physical education requirements outlined in the section of this catalog titled Requirements for Graduation. In addition, they may substitute three hours of air science for any three hours of the general education requirements. The program outlined assumes that advantage will be taken of the opportunity to cross reference six hours of religion with six hours of other general educational requirements. Particular information relative to other recommended courses to be included in the general educational requirements or possible options emphasizing various professional aspects may be had by direct application to the department chairman.

The following abbreviations are used: Ch.E., for Chemical Engineering; C.E., for Civil Engineering; E.E., for Electrical Engineering; G.E., for Geological Engineering; M.E., for Mechanical Engineering; and G.E.R., for General Education Requirements.

Suggested Sequence of Courses for Majors

First Year				Second Year			
	A	W	S		A	W	S
Chemistry 105, 106, 107	4	4	4	Math. 232, 233, 234	5	5	5
Math. 111, 112, 231*	5	5	5	Physics 211, 212, 213	5	5	5
English 111, 112, 113**	3	3	3	C. E. 201, 202, 203	3	3	3
M. E. 100	1			Group Elective (G.E.R.			
Health 130	2			Sec. 3)			5
Physical Education	1	1	1	Religion (cross reference with			
Group Elective (G.E.R.				G.E.R. Sec. 4)	4	3	
Sec. 3)***			5				
Religion	2	4		Total Hours	17	16	18
Total Hours	18	17	18				

Third Year							
	A	W	S		A	W	S
C.E. 301, 302, 303	4	4	5	C.E. 401, 410	3	4	
C.E. 320, 321	4		4	Bacteriology 301, 311	5	0	3
Mathematics 316, 317		3	3	Group Elective (G.E.R.			
M.E. 327, 367		4	1	Sec. 4)	3	3	
M.E. 410			4	Religion	2	2	
Ch. E. 378, 379	2	2		Total Hours	17	17	16
Group Elective (G.E.R.				Fifth Year			
Sec. 4)	3			C.E. 401, 505	5	5	
Religion (cross reference with				E.E. 301, 302, 303	4	4	4
G.E.R. Sec. 4)	4	3		C.E. 420, 520, 521	4	3	3
Total Hours	17	16	17	C.E. 430	4		
Fourth Year				C.E. 507****		5	
C.E. 432, 429		3	4	C.E. 540****		5	
C.E. 402, 403, 404	4	5	5	Group Elective (G.E.R.			
Geology 102, 110			4	Sec. 4)		5	
				Total Hours	17	17	17

*Students with competent backgrounds of algebra and trigonometry from high school instruction may be exempted from Mathematics 111 and 112 subject to passing an appropriate entrance examination.

**The English Department requires a placement examination which may result in students being required to take additional English of a remedial nature, or being permitted to take the more advanced courses of English 115 and 116 requiring only 6 credit hours.

***Recommended subjects to fill the group electives required by the University regulation may be obtained from the department chairman.

****Either C.E. 540 or C.E. 507 are required subjects for graduation. Students may select either with the consent of the department chairman.

Lower Division Courses

- 201 (9). **Engineering Graphics.** (3:2:4) A. Prerequisites: Mathematics 111, 112, 231; must be taken concurrently with Mathematics 232. Staff
Materials and instruments in engineering drawing, introductory practice in orthographic projection, transfer of pictorial sketches and machine part samples to scaled drawing, reproduction processes, drawing principles.
- 202 (10). **Engineering Graphics.** (3:2:4) W. Prerequisite: C.E. 201; must be taken concurrently with Mathematics 233. Staff
Graphics principles, including descriptive geometry; projections, perspective applications, and developments.
- 203 (11). **Engineering Graphics.** (3:2:4) S. Prerequisite: C.E. 202; must be taken concurrently with Mathematics 234. Staff
Graphical mathematics, empirical equations, nomography, graphical calculus, graphic statics.

Upper Division Courses

- 301 (101). **Engineering Mechanics (Statics).** (4:3:3) A. Prerequisites: general physics and C.E. 201, 202, 203. Staff
Introductory concepts of mechanics, force systems and problems of equilibrium applied to structures, centers of gravity and centroids, elementary hydrostatics, friction in engineering problems, beam problems, virtual work.
- 302 (102). **Engineering Mechanics (Dynamics).** (4:3:3) W. Prerequisite: C.E. 301. Staff
Definitions and principles of kinematics and kinetics; engineering appli-

cations in terms of force, mass, acceleration, work and energy, impulse and momentum, periodic motion.

- 303 (103). Engineering Mechanics (Mechanics of Materials).** (5:4:3) S. Pre-Staff
 prerequisite: C.E. 301.
 Fundamental concepts in terms of elastic stress and strain relations; cylinders and spheres under pressure; problems of torsional load; beam theory including bending stresses, complex stress, calculation of deflection and continuity aspects; two-dimensional elastic theory.
- 320 (120). Surveying I.** (4:3:3) A. Prerequisites: Civil Engineering 201, 202, 203. Staff
 Lectures and field work in measurements of distances, angles, and differences of elevation using the usual survey methods and instruments; preparation of notes; adjustments; simple triangulation and traverses; plane table, tacheometry.
- 321 (New). Engineering Measurements.** (4:3:3) S. Prerequisite: C.E. 320. Staff
 More advanced concepts in survey theory including curve and earthwork survey, astronomical observations, introductory mining survey, photogrammetry and map projections. Emphasis is placed on engineering uses of survey techniques.
- 401 (110). Properties of Materials.** (3:2:3) A.W. Prerequisite: C.E. 303 or consent of instructor. Staff
 Theories and procedure of physical testing of materials, introduction to failure theories and solid state concept of behavior of materials; the mechanics of deformation.
- 402 (140). Structures 1.** (4:3:3) A. Prerequisite: C. E. 303. Staff
 Theory and design of statically determinate frame structures in steel and timber; loading problems, influence lines, deflection.
- 403 (141). Structures 2.** (5:4:3) W. Prerequisite. C.E. 402. Staff
 Continuation of Civil Engineering 402, web girders, mill buildings, column and joint details.
- 404 (142). Structures 3.** (5:4:3) S. Prerequisite: C. E. 403. Staff
 Continuation of Civil Engineering 403; theory and design of elastic approach to reinforced concrete structures; proportioning of concrete structures, building code requirements.
- 410 (130). Concrete Technology I.** (4:3:3) W. Prerequisite: Geology 110, C.E. 303. Staff
 Manufacture and testing of cements, technology of concrete materials and concrete mix design; techniques of concrete handling, placing and treatment; laboratory work.
- 420 (New). Elementary Soil Mechanics.** (4:3:3) A. Prerequisites: Geology 110 and General Physics. Rollins
 Basic physico-chemical characteristics of soils. The soil water system. Permeability seepage and associated uplift pressures. Consolidation theory, strength theory and the shearing strengths of sand and clay. Earth pressure theories, slope stability analysis and applied aspects.
- 429 (160). Hydraulic Design.** (4:3:3) A. Prerequisite: C.E. 432. Staff
 Theory and design of water control and water conveyance structures such as dams, pipe-lines, open channels, hydraulic transitions.
- 430 (172). Sanitation and Public Health.** (4:3:6) A. Prerequisite: Fifth year standing in engineering science. Three lectures, two project periods. Staff
 Review of public health engineering. Application to design, construction and operation of water supply and sewerage systems.
- 432 (161). Hydrology.** (3:2:3) S. Prerequisite: M.E. 410. Staff
 A study of water as it occurs in nature; relationships between precipi-

tation, evaporation, infiltration, transpiration, groundwater, and stream runoff; methods of collection of hydrologic data and their use in water resource and flood control studies.

Advanced Undergraduate or Graduate Courses

- 501 (143). Structures 4.** (5:3:6) A. Prerequisite: C.E. 404. Staff
Theory and design of statically indeterminate structures, redundant frames, strain energy methods, Castigliano's theorems, slope-deflection equations and relaxation methods, associated drawing office work.
- 504 (210). Theory of Elasticity.** (5:4:3) A. Prerequisites: C.E. 401, Mathematics 315, 316. Staff
Theory of elastic behavior, complex stress failure and failure theories, selected experimental work.
- 505 (202). Advanced Structures.** (5:3:6) W. Prerequisite: C.E. 501. Staff
Continuation of Civil Engineering 501. Selected topics in advanced structural theory and design.
- 507 (New). Experimental Stress Analysis and Computations.** (5:3:6) S. Prerequisites: C.E. 401, Math. 315, 316. Hodson
Elementary survey and demonstrative exercises in experimental stress analysis methods and techniques. Computations involved in this and other Civil Engineering fields using digital and analog computers.
- 510 (230). Concrete Technology II.** (5:3:6) S. Prerequisite: C.E. 410. Staff
Basic behavior of concrete materials, introductory micromeritics, physical behavior of set concretes; cement additive and replacement compounds applied to concrete performance; examination of physical and chemical factors; special techniques.
- 520 (New). Foundation Engineering.** (3:2:3) W. Prerequisites: C.E. 420. Rollins
Subsurface exploration, bearing capacity concepts, settlement of structures and basic principles of foundation design.
- 521 (New). Roads and Pavements.** (3:2:3) S. Prerequisite: C.E. 520. Staff
Traffic studies, geometric design, grade separations, and interchanges. Properties subgrades, base courses, bituminous materials, and surface pavements. Theory and practice in flexible pavement design. Design of concrete pavements, techniques of road construction.
- 540 (New). Professional Aspects of Civil Engineering.** (5:3:6) S. Prerequisite: Fifth year standing in Civil Engineering Science. Staff
Professional, legal and economic problems of the Civil Engineers, including contracts, specification writing and ethics. Various applied exercises are required.

Clothing and Textiles

Assistant Professors: M. S. Potter (chairman, 3256H SFLC), Jorgensen.
Instructors: Argyle, Carlson, Domgaard, E. L. Gardner, Trost.

Courses in the Department of Clothing and Textiles help the student understand clothing as it relates to personal needs and to the needs of family members. Consideration is given to the satisfaction of desires to express creative abilities; the understanding of fabrics, their selection, use and care; economy; and the comfort and health of the body. The curriculum offers experience in clothing selection, buying, design, and construction; provides instruction in the identification and quality of performance of textiles; and engenders an appreciation for the history of costume and textiles.

Study in the Department of Clothing and Textiles, combined with experience and an appropriate minor, leads to many professional opportunities. Students prepare for careers in such fields as professional buying, textile testing, fashion illustrating, promotional fashion work, dressmaking demonstrating, phases of garment manufacturing, and dress and fabric designing. Background is also provided for graduate study in college teaching, research and extension.

For minors in clothing and textiles, a total of at least 20 credit hours in the department is required. A minimum of one course in at least 3 of the 4 areas listed is suggested:

Construction: 105, 115, 225, 335, 355, 475, 595.
Textiles: 260, 560, 590, 594.
Design and Selection: 110, 124, 340, 345.
Economics and History: 330, 430, 370, 472.

For majors in clothing and textiles, a minimum of 32 credit hours in the department is required, including at least 5 hours in each of the four areas. A special problem (CT 594 or 595) is expected. These hours must be combined with enough credits in the College to total 60 hours. Included shall be:

	Hours
Economics and Management of the Home	3
Food and Nutrition	4
Housing and Design	3
Human Development and Family Relationships	6
Total Hours	16

Suggested Program for Majors

Freshman Year			
	Hours		
Religion*	6	Zoology 105 or 164	5
English**	9	Economics 101	
Phys. Ed. and Health**	4	or Agr. Econ. 101	5
Chemistry 101, 102 or		Food and Nutrition 110, 240	4-8
105, 106, 107	9 or 15	Housing and Design 120, 335,	
Psychology 111	5	360	2-3
Art 110*	2	Human Development and Family	
Family Living 101	1	Relationships 210, 211	3-4
Clothing and Textiles 110,		Clothing and Textiles 260	3
115, 225	8	Electives	7-13
Electives	4-7		
Sophomore Year		Junior Year	
	Hours		Hours
Religion*	6	Religion*	6
Physics 104	3	English (Literature)	3
Bacteriology 121	4	History 180	2
		Art	5
		Econ. and Mgt. of the Home 330..	3

Hum. Dev. and Fam. Rel. 322, 360, 361	3
Clothing and Textiles (Courses toward major)	10
Electives	16

Senior Year

Hours

Religion*	6
English (Literature)	3

Humanities and Aesthetics (art, music, speech)	6
Homemaking Education 377, 381..	6
Econ. and Mgt. of the Home 470..	4
Clothing and Textiles (Courses toward major)	11
Electives	11-13

*Required

**Required during year listed.

Students interested in textile design may complete a major in clothing and textiles with a minor in art. The following courses are recommended: Art 111, 121, 304, 314, 350, 352, 362, 366.

Those interested in costume design may complete a major in clothing with a minor in art. The following courses are recommended: Art 111, 122 or 304, 314, 322, 343, 352, 362, 366.

Those interested in fashion merchandising may complete a major in clothing and textiles with a minor in marketing. The following courses are required: Business Management 347, 455, 557, plus 5 hours selected from among Business Management 451, 456, 480, and 481.

Majors in clothing and textiles desiring to teach in secondary schools should complete a double major in homemaking education and clothing and textiles. (See requirements for homemaking education.) This plan requires at least two additional quarters, or 33-36 credit hours.

Courses in other departments that might be of interest to students in clothing and textiles are Art 250, Print Making; 259, Ceramics; 263, Crafts; 406, Art History and Appreciation; 366, Metal Work and Jewelry; Housing and Design 120, Weaving; 360, Home Furnishings; Industrial Arts 119 or 319, Upholstery; 464, Plastics.

Many of the following courses are of value to both men and women.
(For more information see section on College of Family Living.)

Lower Division Courses

- 105 (5). Elementary Clothing Construction.** (2:0:4) A.W.S. No credit given toward a major in clothing and textiles. Argyle, Staff
Service course for students with little or no experience in sewing. Construction of garments such as blouses, skirts, jumpers, cotton dresses, house coats and pajamas.
- 110 (10). Selection and Care.** (2:2:1) A.W.S. Argyle, Carlson, Gardner
Self-improvement and self-expression approached through study of elements and principles of design as applied to selection and wearing of clothes and accessories; planning, cost and care of wardrobe; personal analysis—grooming, posture, poise and personality.
- 115 (15). Dress Construction.** (3:0:6) A.W.S. Staff
Factors that influence choice of patterns and materials for dresses. Construction of a tailored dress with emphasis on techniques and procedures.
- 124 (20). Clothing Selection and Care.** (1:2:1) A.W.S. Elect with Food and Nutrition 124. Bryner, Staff
Designed to help men students develop good taste and judgment of values in clothing selection and purchase. Practical experience provided in clothing care, choice of color, fabric and style.
- 225 (25). Design and Construction.** (3:0:6) A.W.S. Prerequisite: Clothing and Textiles 115. Domgaard, Gardner, Jorgensen
Introduction to pattern analysis; modification of commercial patterns. New

techniques, design problems, and dressmaking skills applied to construction of afternoon and evening dresses.

- 260 (60). **Textiles.** (3:3:3) A.W.S. Domgaard, Potter
Natural and synthetic textile fabrics; fibers, yarns, weaves and other methods of fabrication, dyes, finishes, properties, and uses from consumer point of view.

Upper Division Courses

- 330 (130). **History of Costume.** (3:3:0) A. Jorgensen
Social, economic, and political influence on dress. Study of costume as expression of the life of the people and as basis for interpreting modern fashions.
- 335 (135). **Family Clothing.** (3:0:6) A.W.S. Prerequisites: Clothing and Textiles 225 and 260. Domgaard, Jorgensen
Problems involving selection, cost, care, construction and remodeling of clothing for family members.
- 340 (150). **Costume Design.** (3:2:4) W. Prerequisites: Art 110 or Clothing and Textiles 110 and 115; recommended: 225 and 330. Potter
By use of various media for inspiration, opportunity for creative experience is given in applying principles of line, texture, and color to clothing design.
- 345 (155). **Draping and Flat Pattern Design.** (3:0:6) S. Prerequisites: Clothing and Textiles 225 and 260; recommended: 330 and 340. Gardner
Creative design achieved through techniques of draping on individualized dress form and of flat pattern design.
- 355 (145). **Tailoring.** (4:0:12) A.S. Prerequisites: Clothing and Textiles 225 and 260; recommended: 110. Domgaard, Gardner
Custom tailoring techniques applied to construction of coats and suits.
- 370 (170). **Consumer Problems in Clothing and Household Textiles.** (2:2:0) A. W. Trost
Determining factors in selection and purchase of family clothing articles and household fabrics, such as linens, rugs, draperies, and upholstery.
- 430 (140). **Historic Textiles.** (3:3:0) S. Taught 1958 and alternate years. Prerequisites: Clothing and Textiles 260. Potter
History and development of textile fabrics, including weaves and patterns; hand-made lace, tapestry, and oriental rugs.
- 472 (172). **Fashion Industry.** (2:2:0) W. Taught 1957 and alternate years. Carlson, Jorgensen
History, development and function of fashion industry and garment production; fashion designers, fashion cycles and trade organizations.
- 475 (175). **Construction Techniques.** (2:0:6) A.W. Prerequisite: Clothing and Textiles 225. Jorgensen
Comprehensive course in sewing techniques. Preparation of illustrative material for aid in teaching.

Advanced Undergraduate or Graduate Courses

- 560 (160). **Advanced Textiles.** (3:3:3) A. Prerequisites: Clothing and Textiles 260, Chemistry 101 and 102. Potter
Testing physical and chemical properties of fibers and fabrics to determine their use and care. Recent textile developments.
- 590 (180). **Readings.** (2:2:0) S. Restricted to students who have completed at least 17 hours of clothing and textiles. Potter
Reports and discussions on current literature in Clothing and Textiles.
- 594 (194). **Special Problems in Textiles.** (Arr.) A.W.S. Staff

- 595 (195). Special Problems in Clothing Construction.** (Arr.) A.W.S. Staff
- 641 (231). Problems in Teaching Clothing and Textiles in Secondary Schools.** Staff
(3:3:0) Su.
- 642, 643, 644 (231, 232, 233). A Series of Summer Workshops to Assist the High School Teacher.** (2:2:0 ea.) Su. Staff

Comparative Literature

(See courses in English.)

Dairy Husbandry

(See courses in Animal Husbandry.)

Dramatic Arts

(See courses in Speech and Dramatic Arts.)

Drawing

(See courses in Industrial Arts and Drawing.)

Economics

Professor: Pond.

Associate Professor: Nielson.

Assistant Professor: Davies.

Instructors: Bradford*, Doxey.

The Economics Department serves three types of students:

1. The economics major for whom a wide range of challenging areas is available.
2. All business students, assisting them to see where their specialty fits into the general economic picture.
3. The general university student, to aid him in his role as a consumer, worker, and citizen.

The philosophy of the department is to provide a liberal background to serve as a basis for entrance into many professional areas. Thus, a minimum of specific courses is required, allowing the student great flexibility in developing his own program.

Several programs are available to serve students majoring in economics:

1. General Business Economics—for students intending to go directly into business and desiring a broad background.
2. Labor Relations and Labor Economics—for those who intend to make labor relations a profession.
3. Political Economics—for those contemplating law or government service.
4. Economic Theory—for students intending to do graduate work in economics or allied fields.
5. International Economics—for those desiring to enter foreign service or engage in international trade.
6. Statistics—for students desiring to become statisticians or research economists.

Specifically required of all majors are Accounting 101 or equivalent, 230; Business Management 340, 342, 347, and 470 or 471; Economics 111 or equivalent, 274, 331, 345, 453, 580 and 586.

Economics is also one of the subjects comprising the composite majors in business and social science for prospective teachers.

Lower Division Courses

- 101 (1). **Economic Principles and Problems.** (5:5:0) A.W.S. (G-SS) Staff
 Basic general education course in economics to prepare students for citizenship by training in fundamental economic principles and developing an understanding of the most important aspects of some of the critical economic problems facing America and the world today.
- 102 (New). **Economic Principles and Problems** (3:3:0) A.W.S. (G-SS). Prerequisite: Economics 101. Staff
 A continuation of Economics 101.

- 111 (New). Economic Principles and Problems (5:5:0) A.W.S. Staff**
 An intensive analysis of the basic economic principles and problems. Designed for superior students who can give evidence of their ability to meet the standards required. Covers the same material as Economics 101 and 102.
- 274 (74). Economic and Financial History of the United States (5:5:0) A.W.S. Doxey (G-HA).**
 A study of the important economic developments in the history of the United States. Special attention is given to their effect on the present day economy.

Upper Division Courses

- 331 (75). Business and Economic Statistics. (5:5:0) A.W.S. Prerequisites: Accounting 230 or Mathematics 111. Staff**
 Collection, presentation, analysis and interpretation of data including sampling procedures, averages, measures of dispersion, index numbers, business fluctuations and correlation.
- 345 (145). Intermediate Economic Theory (5:5:0) A.W.S. Prerequisite: Economics 101 and 102, or 111. Staff**
 Analysis of price, distribution and national income theory.
- 453 (F.&B. 153). Money and Banking. (5:5:0) A.W.S. Staff**
 Principles of money and banking and exemplifications of these principles in monetary and banking history of the United States.
- 461 (161). Labor Problems and Labor Relations (3:3:0) A. (G-SS) Davies**
 Rise and growth of labor organizations resulting from modern industrialization, public regulation, organization of the wage system, and problems of labor-management relationships.

Advanced Undergraduate or Graduate Courses

- 533 (New). Statistical Methods. (5:5:0) W. Prerequisite: Economics 331 or equivalent. Nielson**
- 534 (New). Sampling Techniques. (3:3:0) A. Prerequisite: Economics 331 or equivalent. Nielson**
- 550 (268). Economics of Finance. (5:5:0) W. Staff**
- 556 (156). Transportation and Traffic Management. (5:5:0) S. Staff**
- 558 (278). International Trade and Finance. (5:5:0) S. Doxey**
- 562 (262). Collective Bargaining and Industrial Relations. (3:3:0) W. Prerequisite: Economics 461 or permission of instructor. Davies**
- 563 (263). Labor Law (3:3:0) S. Prerequisite: Economics 461 or permission of instructor. Davies**
- 575 (167). Government Finance (5:5:0) A. (G-SS) Bradford**
 Financing of federal, state and local government. Includes a study of expenditures, taxes, budgeting, and government financial policies.
- 576 (176). Government and Business. (5:5:0) W. Bradford**
- 580 (249). History of Economic Thought. (5:5:0) A. Davies**
- 586 (246). Advanced Economic Theory. (5:5:0) S. Prerequisite: Economics 345. Pond**
 An intensive analysis of distribution, aggregative and price theory.
- 593, 594, 595 (285, 286, 287). Seminar. (1-2:1-2:0 ea.) A.W.S. Staff**

Graduate Courses

- 681 (New). **Contemporary Economic Thought.** (3:3:0) W. Prerequisite: Economics 580. Staff
- 682 (New). **Business and Economic Fluctuations** (3:3:0) A. Prerequisites: Economics 231 and 345. Staff
- 683 (New). **Comparative Economic Systems.** (3:3:0) S. Prerequisites: Economics 345 and 580. Staff
 Study of the history, theory and practice of important economic systems. Emphasis will be on capitalism, socialism, communism and fascism.
- 696, 697, 698 (296, 297, 298). **Research.** (Arr.) A.W.S. Staff
- 699 (300). **Thesis for Master's Degree** (Arr.) Staff

These courses also count in Economics:

- Business Management 451. **Investments.** (5:5:0)
 Business Management 454. **Real Estate and Urban Land Economics.** (5:5:0)
 Geography 223. **Economic Geography.** (5:5:0)
 Agricultural Economics 570. **Agricultural Prices.** (3:3:0)
 Agricultural Economics 580. **Agricultural Policy.** (3:3:0)

Economics, Agricultural

(See courses in Agricultural Economics.)

Economics and Management of the Home

Instructors: V. Barnett (chairman, 1201 SFLC), S. Lewis.

The courses in the Department of Economics and Management of the Home provide an opportunity to study the management of family resources in terms of the goals of all members of the family. The student is helped to understand that choices in regard to the uses of material goods, time, energy, money, abilities, and skills are made primarily on the basis of family relationships and the optimum development of the individual.

A minor is offered in the department. A major is offered in conjunction with the Department of Housing and Design for students interested in becoming county home agents or wishing to do home service work for commercial companies.

County Home Agent Work: Many opportunities are available for women in this field. County home agents are cooperatively employed by the United States Department of Agriculture, the State University, and the county offering employment. Maturity of judgment and understanding are essential personality characteristics for those interested in this type of work.

Home Service Work: Many utility and food product companies hire qualified women to demonstrate their products; they are designated in the field as home economists in business.

For a combined major in economics and management of the home and housing and design a total of 32 credit hours in the two departments is required. For graduation from the College of Family Living these hours must be combined with enough credits in the College to total 60 hours.

Included shall be clothing and textiles, 10 hours; food and nutrition, 10 hours; human development and family relationships, 8 hours; homemaking education, 7 hours.

The following is a suggested program for a composite major in Economics and Management and Housing and Design.

Freshman Year		Hours			
Religion	6		Speech 102	3	
English	9		Zoology 105 or 164	5	
Physical Education	3		Clothing and Textiles 225	3	
Health	2		Clothing and Textiles 260	3	
Art 110	2		Economics and		
Chemistry 101, 102	9		Management 325	3	
Physics 104	3		Housing and Design 135	3	
Psychology 111	5		H.D.F.R. 210, 211	4	
Food and Nutrition 110	4		*County Home Agents		
Clothing and Textiles					
105, 110 or 115	2-3				
Economics and					
Management 130	3				
Family Living 101	1				
Electives	4-6				
Sophomore Year		Hours			
Religion	6				
Bacteriology 121	4				
Economics 101, or					
*Ag. Economics 101	5				
Humanities and Aesthetics	4				
			Junior Year	Hours	
			Religion	6	
			English (literature)	3	
			History 180	5	
			Journalism 211	3	
			Speech 103	2	
			Clothing and Textiles 335	3	
			Economics and		
			Management 330	3	
			Food and Nutrition 255-256	3	
			H.D.F.R. 360	3	
			Housing and Design 360	3	
			Electives	10-12	

Senior Year	Hours	Economics and Manage-
Religion	6	ment 470, 580, 590, 5954, 2, 3, 3
Sociology 423	3	Food and Nutrition 340
Business 275	3	Home Education 475
Clothing and Textiles 335	4	Home Education 478
Clothing and Textiles 475	2	H.D.F.R. 361
Economics and		Housing and Design 375
Management 350	2	Electives
		10-12

Courses in other departments recommended for students training to be county home agents are Art 263; Clothing and Textiles 110, 370; Education: Instruction 305, 605; Food and Nutrition 470; Horticulture 103, 112; Nursing 288; Physics 177; Recreation 371.

Courses recommended for students training to be home economists in business are Art 240, 448; Clothing and Textiles 110, 225; Education: Instruction 305, 605; Horticulture 112; Business Management 340, 420, 455; Physics 177; Speech 241, 255.

Some of the following courses are planned for both men and women.

Lower Division Course

- 130 (30). Management for Effective Living. (3:3:0) A.W.S. V. Barnett, S. Lewis
Effective budgeting of time, money and energy; work simplification, meal planning, recreation and use of leisure. Especially helpful to students living in Heritage Halls or other housekeeping apartments.

Upper Division Courses

- 325 (125). Family Finance. (3:3:0) A.S. Prerequisite: Economics 101. V. Barnett
Economic problems of most direct concern to the family of today. Sources and adequacy of family income, its apportionment and expenditure in terms of family needs.
- 330 (130). Home Management. (3:3:0) W.S. Prerequisites: Human Development and Family Relationships 361 and Food and Nutrition 240 or 340. V. Barnett
Place of management in achieving personal and family goals from time of marriage to retirement. Opportunities for children to share and take responsibility. Management related to specific resources, as time, energy, money, material goods, skills, abilities and interests.
- 350 (50). Simplification of Household Tasks. (2:1:2) S. Prerequisite: Economics and Management of the Home 330. V. Barnett
Effective planning of work centers. Laboratory experience in the organization and simplification of techniques used in household operation.
- 470 (170). Homemaking Apartment. (4:4:20) A.W.S. Prerequisites: Economics and Management of the Home 330 and Food and Nutrition 240 or 340.
Arrangements must be made in advance, through the advisor, for living in the apartment. Students live in the homemaking apartment one half of the quarter (block), for experience in group living and management at various cost levels. Food and incidentals average \$40.00 for the five-week period (\$5.00* payable at registration the quarter before residence; \$35.00 payable at beginning of residence).

*Not returnable.

Advanced Undergraduate or Graduate Courses

- 580 (180). Readings in Economics and Management of the Home. (2:2:0) (Not given this year.) Prerequisites: 16 hours of economics and management of the home. Staff

- 590 (190). Problems in Management of the Home. (Arr.) (Not given this year.)**
Prerequisites: 18 hours of economics and economics and management of the home. By permission of instructor and dean. Staff
Independent study of a special problem in management of the home under direction of an instructor.
- 595 (195). Problems in Economics of the Home. (Arr.) (Not given this year.)**
Prerequisite: 18 hours of economics and economics and management of the home. By permission of instructor and dean.
Independent study of a special problem in economics of the home under direction of an instructor.

Graduate Courses

- 651 (New). Problems in Teaching Management of the Home in Secondary Schools. (3:3:0) Su.** Staff
- 665 (New). Problems of the Consumer. (3:3:0) Su.** Staff

These courses also count in Economics and Management of the Home:

Business Management 205. Personal Finance. (3:3:0)

Economics 274. Economic and Financial History of the United States. (5:5:0)

Education: Instruction

Professor: Jenson

Associate Professors: D. C. Christensen (chairman, 150 McK), Bauer, Callahan, Campbell, Candland, Rigby.

Assistant Professors: Alder, Babcock, Bean, Berryessa, Crnkovic, Daines, Flandro, Hammond (emeritus), Maeser, Shirts, Tyndall, Wilcox.

Instructors: Memmott, Ord, Uteley.

Laboratory and Methods Teachers: Allred, Bennett, Brown, Carlisle, H. Clark, W. Clark, Davidson, Gagon, Hogan, Miller, Rasband, Rogers, Williams.

The offerings in this department are intended to assist teachers in the development of the skills involved in the act of instruction, whether it be in or out of the classroom, and at any level or in any special area of education. Courses sponsored exclusively by this department are usually limited to those in which methodology of teaching or problems in organizing materials for teaching are the dominant content.

The offerings in instruction are presented under the following divisions: General, Elementary, Secondary, College, and Special Study.

GENERAL INSTRUCTION

Courses listed under "General Instruction" serve the needs of other divisions within the Department of Instruction.

Upper Division Courses

- 300 (New). Teaching in the Church.** (2:2:0) A.W.S. (G-R) Staff
Equivalent to the Church Teacher Training Program. Does not apply to state certification.
- 305 (175). Audio-Visual Education.** (3:3:1) A.W.S. Tyndall, Memmott, Staff
Introduction to audio-visual field. Sources, selection, evaluation, and utilization of audio-visual materials in the classroom in accordance with modern psychology of learning. Operation and care of projection equipment.
- 307 (177). Motion Picture Photography.** (3:3:1) A.S. Prerequisites: Physics 177, Speech 251, Instruction 305 or equivalent. Tyndall
Principles of motion picture photography in educational, recreational, and professional application; practice in use of motion picture camera for indoor and outdoor subjects; script preparation, film editing, titling, sound recording, and special effects.
- 450 (185). Principles of Curriculum and Teaching.** (3:3:0) A.W.S. Prerequisite: Instruction 448 (Elementary) or Instruction 479 (Secondary).
Daines, Flandro, Rogers, Uteley, Staff
Systematic survey of principles developed from preceding courses, extended by addition of other principles fundamental to the methodology of teaching and applied to the complete role of the teacher.

Graduate Courses

- 605 (275). Development of Instructional Materials.** (3:3:1) W. Prerequisite: Instruction 305. Tyndall, Staff
- 608 (278). Radio and Television in Education.** (2:2:1) S. Tyndall
- 610 (284). Advanced Student Teaching for Experienced Teachers.** (2-8:1:4-20)

A.W.S. Prerequisite: Field experience plus approval of special committee and chairman of department. Staff

Application should be made in advance.

- 612 (287). **Administration and Supervision of Student Teaching.** (3:3:0) A.W.S. Flandro, Callahan, Staff

- 614, 615, 616 (290, 291, 292). **Analysis of In-Service Problems.** (2-5:2-5:0) A.W.S. Staff

ELEMENTARY INSTRUCTION

Upper Division Courses

- 324 (104). **Arts and Crafts for Elementary Teachers.** (2:4:0) A.W.S. Alder, Staff
Handicrafts for teachers of children in elementary schools.

- 325 (105). **Arts and Crafts for Early Childhood.** (2:4:0) A.W.S. Alder, Staff
Handicrafts for teachers of children in kindergarten and first grade.

- 338 (108). **Manuscript Writing for Elementary Teachers.** (2:4:0) A.W.S. Staff

A course designed to develop teachers' skills in manuscript writing, construction of charts, and teaching children to write.

- 340 (110). **Children's Literature.** (3:3:0) A.W.S. Hammond, Bennett, Staff
Evaluation of significant books, past and present, that meet children's needs.

- 345 (115). **Basic Classroom Procedures and Participation.** (4:3:4) A.W.S. Prerequisite: E.R.S. 305. Maeser, Ord

Organizing the classroom, pupil accounting, grouping, programming, location and use of teaching materials. Students will be assigned as assistants to teachers in the laboratory or public schools four hours per week. Laboratory fee \$15.00.

- 346 (116). **Curriculum and Methods in Elementary School Social Studies and Science.** (4:4:2) A.W.S. Prerequisite: Instruction 447. Babcock, Bean

Bennett, Berryessa, Brown, Candland, Ord

Directed observation TBA.

- 422 (102). **Early Childhood Education Curriculum.** (3-5:3-5:0) A.S. Prerequisite: Instruction 345. Campbell, Bennett, Staff

Principal attention given to kindergarten and first grade. Recommended for HDEF majors. Students registered in elementary instruction should take sections of this course for which three quarter hours of credit are given. Students registered in HDEF must take sections of this course for which five quarter hours of credit are given.

- 433 (New). **Construction and Use of Teaching Materials.** (2:4:0) A.W.S.

Gagon, Memmott, Staff
Construction of chart holders, flannel boards, terrariums and other items used in teaching elementary schools.

- 447 (117). **Curriculum and Methods of Elementary School Language Arts and Arithmetic.** (4:4:2) A.W.S. Prerequisite: Instruction 345. Babcock, Bean, Berryessa, Brown, Campbell, Rogers, Williams

- 448 (118). **Elementary Student Teaching.** (6:0:20) A.W.S. Prerequisite: Instruction 447. To be taken concurrently with Instruction 346.

Eastmond, Williams, Staff
For seniors, third quarter juniors or graduate students. A full half-day must be reserved for assignment in the public schools. Laboratory fee: \$15.00. Seminar on student-teaching problems to be held weekly.

- 449 (119). **Field Student Teaching.** (6:0:35-40) A.W.S. Prerequisite: Instruction 448. Eastmond, Williams, Staff

Students will spend a five-week block in a full-day teaching situation in the public schools. This may be either first or last half of the quarter. Remaining half quarter will be spent in required "block" classes as listed in recommended sequence. Laboratory fee. \$15:00.

Advanced Undergraduate or Graduate Courses

- 529 (109). **Directed Observation in Elementary Schools.** (3:2:6) A.W.S. Bennett, Maeser, Williams, Staff
For experienced teachers or secondary majors who wish to obtain an elementary certificate.

- 534 (114). **Overview of Elementary Instruction.** (5:5:2) W. (Not for Elementary Instruction Majors.) Maeser, Staff
Designed for secondary teachers and speech majors who wish to obtain an elementary certificate. Also recommended as a refresher for teachers in-service.

Graduate Courses

- 622 (202). **Advanced Study in Early Childhood Education.** (3:3:0) (Arr.) Campbell, Candland
- 623 (213). **Science in the Elementary School.** (3:3:0) S. Babcock, Berryessa, Staff
- 624 (204). **Arts and Crafts for Elementary Teachers.** (2:2:2) (Arr.) Alder, Andrus, Staff
- 626 (203). **Arts and Crafts for the Handicapped.** (2:2:2) W. Wilson, Staff
- 631 (201). **Curriculum Development in the Elementary School.** (3:3:0) W. Daines, Campbell, Candland, Staff
Not open to students who have taken Ed. Inst. 656.
- 633 (205). **Creative Arts in the Elementary School.** (2:2:2) A. Alder, Andrus, Staff
- 635 (215). **Social Studies in the Elementary School.** (3:3:0) A. Campbell, Candland, Ord
- 641 (211). **Language Arts in the Elementary School.** (3:3:0) W. Campbell, Candland, Maeser, Rogers, Staff
- 642 (212). **Reading in the Elementary School.** (3:3:0) W. Candland, Daines, Maeser, Staff
- 644 (214). **Arithmetic in the Elementary School.** (3:3:0) W. Babcock, Bean, Maeser
- 646 (New). **Development of Instructional Methods in the Elementary School.** (3:3:0) W. Staff
Not open to students who have taken Instruction 676.

SECONDARY INSTRUCTION

Upper Division Courses

- 354 (New). **Methods and Materials of Instruction in Secondary Schools.** (5:5:0) A.W.S. Staff
A course designed to meet certificate renewal needs of secondary teachers in Idaho.
- 377 (120). **Basic Classroom Procedures.** (4:4:3) A.W.S. Prerequisite: E.R.S. 305. Lectures, demonstrations, and participation in non-instructional activities

at a high school. Callahan, Christensen, Flandro, Uteley, Wilcox, Staff
(A laboratory fee of \$15.00 is charged.)

- 478 (138). Unit Planning and Teaching.** (4:3:5) A.W.S. Prerequisite: Instruction 377. Callahan, Christensen, Flandro, Uteley, Wilcox, Staff
Lectures, demonstrations and limited participation in instructional activities. (A laboratory fee of \$15.00 is charged.)

- 479 (139). Secondary Student Teaching.** (7:1:20) A.W.S. Prerequisite: Instruction 478 or arrangement to take 478 and 479 according to block plan A. Callahan, Christensen, Flandro, Uteley, Wilcox, Staff
(See description given below.)
(A laboratory fee of \$15.00 is charged.)

Requirements for this course may be met by following either Plan A, B, or C as indicated below. Determination of the specific plan to be followed must be made in consultation with an adviser from secondary education. An application for a specific assignment must be filed with the Certification Office three months in advance of receiving an assignment. Student teachers are expected to do much responsible teaching, participate in co-curricular activities, and keep in close contact with the faculty and students in a public school, as well as participate in seminars and conferences with their supervisor. During this quarter students must limit their total load to 16 hours.

Plan A. Recommended for mature students who can arrange their academic program so that they can leave the campus and take Instruction 478 and 479 and one other professional course concurrently in a student teaching center outside of Utah County.

Plan B. A full day of off-campus student teaching, away from Utah County, for a period of five weeks to be followed by five weeks of on-campus study during which the student will take such courses as Administration 310, Educational Philosophy and Programs 415, and Instruction 450.

Plan C. Supervised teaching in a Utah County public secondary school for a full quarter on a half-day (four hours a day) basis.

Graduate Courses

- 656 (220). Curriculum Development in the Secondary School.** (3:3:0) A. Callahan, Christensen, Flandro, Staff
(Not open to students who have taken Instruction 631.)
- 659 (221). Senior High School Curriculum Workshop.** (3:3:0) S. Callahan, Christensen, Flandro, Staff
- 661 (222). Junior High School Curriculum Workshop.** (3:3:0) W. Staff
- 663 (225). Directing Out-of-Class Activities in Secondary Schools.** (3:3:0) S. Callahan, Christensen, Flandro, Rigby
- 667 (226). Teaching of Reading in the Secondary Schools.** (3:3:0) W. Staff
- 670 (229). Teaching Mathematics and Science in Secondary Schools.** (3:3:0) W. Staff
- 672 (231). Teaching Social Studies in Secondary Schools.** (3:3:0) S. Staff
- 673 (232). Teaching Speech in Secondary Schools.** (3:3:0) W. Staff
- 676 (New). Development of Instructional Methods in the Secondary School.** (3:3:0) S. Staff
Not open to students who have taken Instruction 646.

COLLEGE INSTRUCTION

Graduate Courses

- | | |
|--|-------|
| 682 (241). The Junior College. (5:5:0) A. | Staff |
| 684 (242). Methods of Higher Education Instruction. (4:4:2) W. | Staff |
| 685 (243). Directed Teaching in Higher Education. (6:1:5) Prerequisite: Instruction 684. | Staff |

SPECIAL STUDY

Upper Division Courses

- | | |
|---|-------|
| 490, 491 (196, 197). Seminar. (1-3:1-3:0 ea.) A.W.S. | Staff |
| 493, 494 (194, 195). Independent Reading. (1-3:1-3:0 ea.) A.W.S. | Staff |
| 496, 497 (198, 199). Independent Research. (1-3:1-3:0 ea.) A.W.S. | Staff |

Graduate Courses

- | | |
|---|-------|
| 690, 691 (296, 297). Seminar. (1-3:1-3:0 ea.) A.W.S. | Staff |
| 693, 694 (294, 295). Independent Reading. (1-3:1-3:0 ea.) A.W.S. | Staff |
| 696, 697 (298, 299). Independent Research. (1-3:1-3:0 ea.) A.W.S. | Staff |
| 698 (301). Field Project. (Arr.) | Staff |
| 699 (300). Thesis for Master's Degree. (Arr.) | Staff |

These courses also count in Education: Instruction:

- Art 668. Teaching Art in Secondary Schools. (3:3:0)
- English 669. Teaching English in Secondary Schools. (3:3:0)
- Health Education 310. Driver Education and Training for High School Teachers. (2:2:1)
- Health Education 325. Materials and Methods in Safety Education. (2:2:0)
- Health Education 361. Health Education for Teachers. (3:3:0)
- Home Economics 666. Teaching Home Economics in the Secondary Schools. (3:3:0)
- Journalism 674. Teaching Methods in Journalism. (3:3:0)
- Library Science 350. Classification. (3:3:0)
- Library Science 351. Cataloging. (3:2:2)
- Library Science 363. Library Science for Teachers and Administrators. (3:3:0)
- Library Science 370. Introduction to Bibliography. (3:3:0)
- Library Science 563. Modern Library Practices. (3:3:0)
- Library Science 565. Selection and Use of Library Materials for the Elementary School. (3:3:0)
- Library Science 567. Selection and Use of Materials for the Secondary School. (3:3:0)
- Library Science 571. Bibliography of the Sciences. (3:3:0)
- Library Science 572. Bibliography of the Humanities. (3:3:0)
- Library Science 573. Bibliography of the Social Sciences. (3:3:0)
- Library Science 590. History of Books and Development of Libraries in Our Civilization. (3:3:0)
- Library Science 650. Problems in Acquisition and Organization of Library Materials. (3:3:0)
- Music 615. Vocal Methods, Materials, and Resources. (3:3:0)
- Music 616. Instrumental Methods, Materials, and Resources. (3:3:0)
- Recreation 331. Theory of Play. (3:3:0)

Educational Administration

Professors: Burrup, Clarke, Moffitt, Morrill, Woolf.

Associate Professors: Oakes (chairman, 203 McK), Barnett, Eastmond.

Assistant Professor: Tucker.

Upper Division Course

- 310 (100). The State, the School, and the Teacher. (3:3:0) A.W.S. Staff
 Development of the public school system; relationship of the school to the community school organization and administration with special emphasis on the Utah system; legal relationship and responsibility of federal, state, and local agencies to education.

Graduate Courses

Prerequisite to all courses: 33 hours of education.

- 600 (205). Organization and Administration of Public Schools. (3:3:0) A.W.S.
 Morrill, Burrup, Eastmond
- 610 (200). Public School Finance. (3:3:0) A.W.S. Burrup, Barnett
- 619 (209). Personnel Problems of the School Staff. (3:3:0) A. Barnett
- 626 (226). School-Community Relations. (3:3:0) A. Moffitt, Morrill
- 631 (211). The Elementary School Principalship. (3:3:0) S. Morrill
- 644 (214). Work of the Secondary School Principal. (3:3:0) W. Morrill, Clarke
- 651 (231). Administration of Auxiliary Services. (3:3:0) W. Barnett
- 654 (234). Administration of Pupil Personnel. (3:3:0) S. Burrup
- 665 (225). Supervision of Education. (3:3:0) A.W.S. Clarke, Burrup
- 673 (203). School Law. (3:3:0) W. Burrup, Barnett
- 690, 691 (296, 297). Seminar. (1-3:1-3:0 ea.) A.W.S. Morrill, Eastmond
- 693, 694 (294, 295). Independent Readings. (1-3:3-9:0 ea.) A.W.S. Staff
- 696, 697 (298, 299). Independent Research. (1-3:3-9:0 ea.) A.W.S. Staff
- 698 (301). Field Project. (Arr.) Staff
- 699 (300). Thesis for Master's Degree. (Arr.) Staff
- 700 (232). The Organization of Schools. (2:2:0) W. Staff
- 712 (212). The Junior High School. (3:3:0) A. Clarke
- 723 (213). The Senior High School. (3:3:0) W. Clarke
- 730 (230). Business Administration of the Public Schools. (2-3:2-3:0) S.
 Burrup
- 738 (238). The Group Process in Educational Administration. (2:2:0) W.
 Morrill, Moffitt
- 748 (218). College and University Organization and Administration. (3:3:0)
 Staff
- 749 (239). Evaluation and Accreditation of Educational Institutions. (3:3:0) S.
 Staff
- 750 (201). Public School Building Programs. (3:3:0) A.S. Morrill, Barnett
- 786 (236). Problems of Taxation and Financial Support of Public Institutions.
 (3:3:0) Staff

Educational Philosophy and Programs

Professor: Woodruff.

Assistant Professor: Alley (chairman, 202 McK).

This department is devoted to a critical examination of society for the purpose of determining the general values upon which our educational system should be founded. The approach is historical, political, sociological, religious, and philosophical. The courses also deal with the professional nature of education and educators and the roles of non-educators and educators in public education.

The courses are offered in four divisions: Philosophy of Education, History of Education, The School in the Social Order, and Educational Objectives and Programs. Except for one service course, a seminar and readings and research courses, all courses are at the graduate level.

Upper Division Courses

415 (100). Educational Values. (3:3:0) A.W.S. Prerequisites: Instruction 449 or 479, except that they may be taken in the same quarter as Ed. Phil. 415 on the "block" plan. Oakes, Alley

Identification and analysis of fundamental American values and of values systems, upon which American educational objectives should be based. Problems and concepts encountered in earlier courses in the educational sequence are examined in the light of the values studied.

490, 491 (196, 197). Seminar. (1-3:1-3:0 ea.) A.W.S. Staff

493, 494 (194, 195). Independent Readings. (1-3:3-9:0 ea.) A.W.S. Staff

496, 497 (198, 199). Independent Research. (1-3:3-9:0 ea.) A.W.S. Staff

Philosophy of Education

602 (New). Educational Values and the Experienced Teacher. (3:3:0) Su. Oakes, Alley

604 (New). Comparative Current Educational Philosophies. (3:3:0) A.W.S. Oakes, Alley

605 (200). Educational Thinkers and Contemporary Issues. (3:3:0) W. Oakes, Alley

History of Education

615 (New). Educational Classics. (3:3:0) S. Alley

621 (New). History of Education in Europe and the Near East. (3:3:0) A. Alley

622 (215). History of Education in America. (3:3:0) W. Oakes

631 (New). Education in a World Setting. (3:3:0) S. Oakes, Alley

The School in the Social Order

642 (230). Education in the Social Order. (3:3:0) A. Oakes

Educational Objectives and Programs

662 (245). Philosophy of Program Planning. (3:3:0) S. Woodruff

General Courses

690, 691 (296, 297). Seminar. (1-3:1-3:0 ea.) A.W.S.	Staff
693, 694 (294, 295). Independent Readings. (1-3:3-9:0 ea.) A.W.S.	Staff
696, 697 (298, 299). Independent Research. (1-3:3-9:0 ea.) A.W.S.	Staff
698 (301). Field Project. (Arr.)	Staff
699 (300). Thesis. (Arr.)	Staff

Educational Research and Services

Professors: Egbert (chairman, 254 McKay), Lloyd, Reid, Romney, Woodruff

Associate Professors: S. G. Clark, Downing.

Assistant Professors: Grimes, J. M. Harris, V. H. Jensen, Krider, Parker.

Instructors: Orrock, Wilson.

The offerings and programs in this department are of two kinds: (1) Those which provide teachers and special personnel with the necessary understandings and insights into human behavior and learning, which they will need in working with normal and with exceptional students, and (2) those which promote research and extend educational services to the University and the public schools. In this latter instance the departmental graduate programs in personnel and guidance and in special education are of particular importance to the schools.

This year a program for training of school psychologists is being introduced in collaboration with the Department of Psychology. This is a master's degree program, but interested students should commence the foundation courses early in their undergraduate years.

Lower Division Course

- 102 (45). **College and Life Adjustment.** (3:3:0) A.W.S. Orrock
Major emphasis is given to personal and social development with consideration also to wise vocational and educational planning.

Upper Division Courses

- 304 (100). **Educational Psychology.** (3:3:0) A.S. Prerequisite: H.D.F.R. 40. Romney
Enrollment limited to homemaking education majors except for others who may receive special permission from the instructor. Psychological facts and principles related to the teaching-learning situation.
- 305 (101). **Development and Learning.** (6:5:1) A.W.S. Egbert, Downing,
Harris, Grimes, Parker
Designed to give the student increased understanding of development in childhood and adolescence of both normal and deviate children and of psychological principles related to the teaching-learning situation.
- 410 (130). **Tests and Measurements for the Classroom Teacher.** (3:3:0) W. Harris
Emphasizes techniques for construction and use of classroom tests as measuring and teaching devices; consideration also given to standardized tests and evaluational techniques other than testing.
- 490, 491 (196, 197). **Seminar.** (1:1:0 ea.) A.W.S. Staff
- 493, 494 (196, 197). **Independent Readings.** (1:3:0 ea.) A.W.S. Staff
- 496, 497 (198, 199). **Independent Research.** (1:3:0 ea.) A.W.S. Staff

Advanced Undergraduate or Graduate Courses

- 520 (New). **Group Guidance Techniques for Teachers.** (3:3:0) A.S. Downing
Acquaints teachers with principles of group dynamics and gives increased understanding of application of these principles in classroom situation.
- 540 (115). **Statistical Methods.** (3:3:0) A. Egbert, Grimes, Parker
Graphic and tabular presentation, measures of central tendency, variability, probability, and linear correlation. This course is required but may

not be counted as part of the 45 hours for the master's degree by people majoring in this department.

- 541 (215). **Advanced Statistics.** (3:3:0) S. Prerequisite: E.R.S. 540.
Egbert, Grimes

- 550 (145). **Guidance Services in Public Schools.** (3:3:0) A.W.S. Downing,
Jensen, Parker
Introduction to principles and practices of the guidance program in public schools. Designed for prospective teachers at both elementary and secondary levels. This course is required but may not be counted as part of the 45 hours for the master's degree by people majoring in this department.

- 560 (New). **Introduction to Education of Exceptional Children.** (3:3:0) A.W.S. Wilson
A general course designed to acquaint the student with the causes, recognition, incidence and characteristics of all types of exceptional children. Designed to meet needs of both classroom teacher and person going into special education.

Graduate Courses

- 601 (201). **Advanced Educational Psychology: Problems of Learning in the Elementary School.** (2:2:0) W. Prerequisite: E.R.S. 305. Harris, Egbert
- 602 (202). **Advanced Educational Psychology: Problems of Learning in the Secondary Schools.** (2:2:0) S. Prerequisite: E.R.S. 305. Harris
- 606 (New). **Behavior Problems in the Schools.** (3:3:0) A. Prerequisite: E.R.S. 305 and 550. Grimes
- 610 (230). **Advanced Educational Tests and Measurements.** (3:3:0) S. Harris, Downing, Jensen
- 611 (248). **Test Techniques in Guidance.** (3:3:0) A. Prerequisite: E.R.S. 550. Jensen
- 612 (New). **Diagnosis of Achievement Difficulties.** (3:3:0) A. Prerequisites: E.R.S. 610 or 611. Grimes, Harris
- 620 (244). **Introduction to Counseling Theory and Practice.** (3:3:0) A. Prerequisite: E.R.S. 550. Downing, Jensen, Reid, Parker
- 621 (245). **The Case Study and Diagnosis.** (3:3:0) W. Prerequisite: E.R.S. 550 and 611. Downing, Parker
- 622 (247). **Group Techniques for Counselors.** (3:3:0) W. Prerequisites: E.R.S. 550 and 620. Downing
- 624 (252). **Industrial Counseling.** (3:3:0) S. Prerequisites: E.R.S. 550, 620, 651. Staff
- 625 (246). **Advanced Counseling Theory.** (3:3:0) W. Prerequisites: E.R.S. 550 and 620. Downing, Parker, Reid
- 630 (Instr. 277). **Corrective Teaching Techniques.** (3:3:0) S. Prerequisite: E.R.S. 612 or consent of instructor. Staff
- 640 (New). **Evaluation of Educational and Psychological Literature.** (3:3:0) S. Egbert
- 641 (218). **Educational Research and Thesis Writing.** (2-3:2-3:0) W. Prerequisite: E.R.S. 540. Egbert, Grimes
- 650 (249). **Guidance Workshop.** (3:3:0) Not given this year. Prerequisite: E.R.S. 550. Staff

- 651 (251). **Informational Services in Guidance.** (3:3:0) A. Prerequisite: E.R.S. 550. S. G. Clark, Downing
- 652 (253). **Guidance Services in the Elementary School.** (3:3:0) S. Prerequisite: E.R.S. 550. Downing
- 653 (250). **Administration of Guidance Services.** (3:3:0) S. Prerequisite: E.R.S. 550. Downing, Reid
- 656 (254). **Student Personnel Services in Higher Education.** (3:3:0) S. Prerequisite: E.R.S. 550. Lloyd, S. G. Clark
- 660 (Instr. 280). **Education of Exceptional Children.** (3:3:0) A. Prerequisite: E.R.S. 550 or Psychology 445. Krider
- 661 (Instr. 279). **Problems in the Education of Slow-Learning Children** (3:3:0) W. Prerequisite: E.R.S. 660 or consent of instructor. Krider
- 662 (Instr. 246). **Workshop in Special Education.** (6:6:0) Not given this year. Prerequisite: E.R.S. 560 or consent of instructor. Krider
- 665 (New) **Medical Aspects of Orthopedically Handicapped Children.** (3:3:0) Not given this year. Prerequisite: consent of instructor. Staff
- 666 (New). **Problems in the Education of Orthopedically Handicapped Children.** (3:3:0) S. Prerequisite: E.R.S. 660 or consent of instructor. Wilson
- 667 (Instr. 276). **Problems in the Education of Mentally Retarded Children.** (3:3:0) Not given this year. Prerequisite: E.R.S. 660 or consent of instructor. Staff
- 668 (New). **Observation and Participation in Special Education.** (3:2:5) Prerequisite: consent of instructor. Staff
- 670 (256). **Internship in Testing.** (3:1:6) S. Prerequisite: E.R.S. 550 and 611. Jensen
- 672 (257). **Internship in Counseling.** (3:1:6) W.S. Prerequisite: E.R.S. 550, 611, 620, and 670. Downing, Grimes, Jensen, Parker
- 674 (New). **Internship in Special Education.** (6:1:15) Not given this year. Prerequisite: consent of the instructor. Grimes, Krider, Wilson
- 675, 676 (New). **Internship in School Psychology.** (3:1:6 ea.) Prerequisite: consent of instructor. Grimes
- 690, 691, 692 (295, 296, 297). **Seminar.** (1:1:0 ea.) A.W.S. Staff
- 693, 694, 695 (292, 293, 294). **Independent Readings.** (1:3:0 ea.) A.W.S. Staff
- 696, 697 (298, 299). **Independent Research.** (1:3:0 ea.) A.W.S. Staff
- 698 (301). **Field Project for Master's Degree.** (Arr.) Staff
- 699 (300). **Thesis for Master's Degree.** (Arr.) Staff

Electrical Engineering Science

Professors: Jonsson (chairman, 175 ELB), Bartholomew, H. Fletcher.

Associate Professor: D. Monson.

Instructors: N. Chaston, D. Humpherys.

This department offers a five-year program leading to the degree of Bachelor of Engineering Science in Electrical Engineering. An acoustical option is offered as an alternate course. The student completing the prescribed course of study will receive comprehensive training in electrical engineering which includes communications, electronics, energy conversion, systems and circuits, measurements and automatic control in addition to the general and religious education given to all undergraduate students at Brigham Young University.

Entrance Requirements

In addition to having fulfilled the general entrance requirements of the University, a student entering this department should have completed 3 units of English and 3 units of high school mathematics which **must** include elementary algebra, intermediate algebra, and plane geometry.

Students who have not met these requirements must take extra remedial courses as prescribed by the chairman of this department before, or concurrently with, the regular outlined course of studies.

The high school graduate of above average ability and who has completed both college algebra and trigonometry may be assigned to the second year subjects of physics, calculus, and graphics and thereby complete the five year program in slightly over four years.

Requirements for Major

To obtain a degree in electrical engineering the student must complete the program as described below including the same general educational requirements which apply to the B.S. degree conferred by the Brigham Young University. The following abbreviations are used: Ch. E., for Chemical Engineering; C.E., for Civil Engineering; E.E., for Electrical Engineering; and M.E., for Mechanical Engineering.

Grade Requirements

A student must have received an average grade of "C" or better in calculus and physics before being admitted as a regular third-year engineering student. A student who has not obtained this average but feels that he has the qualifications for undertaking engineering work may petition this department for special consideration. If he is admitted, it will be on a probationary status subject to a continual review. If his work subsequently proves unsatisfactory, he will be dropped from the department.

A cumulative average grade of "C" must be maintained in all advanced mathematics and engineering subjects; otherwise the student is placed on a probationary status in the department.

General Education Group Requirements

The General Education Requirements are listed on page 76 together with elective subjects. The following information on group requirements is directed particularly to electrical engineering science students:

Group I: Automatically filled by following the outline for any engineering field listed below.

	Hours
Group II: Biological Science	8
No specific recommendations are given.	

Group III: Social Science	15
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The following are particularly recommended:

	Hours
Economics 101, Economic Principles	5
History 170, American Heritage (Required)	5
Psychology 111, General Psychology	5

Group IV: Humanities and Aesthetics	15
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Any course listed in the general education requirements is acceptable. The engineering student will observe that allowance has been made for only 70 hours of general group subjects within the formal program. This implies that the student must usually take advantage of the possibility of cross-referencing six hours of credit between the humanities and aesthetics group and the religion group requirement.

Group V: Religion	24
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Any course listed in the general education requirements is acceptable.

Students who are majoring in and who complete the course in engineering science together with requirements for an air science commission are not subject to the physical education requirements outlined on page 77. In addition they may substitute three hours of air science for any three hours of the general education requirements.

Suggested Sequence of Courses for Majors

Freshman							
Chemistry 105, 106, 107	A	W	S	Ch. E. 378, 379	2	2	
*Math 111, 112, 231	4	4	4	E.E. 315	2		
M.E. 100	5	5	5	Geology 102, 110			4
English 111, 112, 113	1			E.E. 431			2
Religion	3	3	3	Religion	2	2	2
P. E.	2	2	2	Group Electives	3		
Health 130	1	1	1				
	2			Total Hours	16	15	17
Total Hours	16	17	15				
*Note entrance requirements above for possibility of reducing time required for graduation.				Senior			
Sophomore	A	W	S	E.E. 460, 461	3		4
Physics 211, 212, 213	5	5	5	E.E. 432, 433, 434	4	4	1
Math 232, 233, 234	5	5	5	E.E. 411	2		
C. E. 201, 202, 203	3	3		E.E. 441, 442, 443	4	4	3
Religion	2	2	2	C.E. 301, 302, 303	4	4	5
Group Electives	3	3	5	Group Electives	4	3	
Total Hours	18	18	17	Total Hours	17	16	16
				Fifth Year			
Junior	A	W	S	M.E. 327, 367, 410	4	1	4
Math 316, 317, 318	3	3	3	E.E. 462, 463	4	4	
E.E. 311, 312, 313	3	3	4	E.E. 467, 468	2	2	
E.E. 321, 322		3	2	E.E. 591, 592, 593	1	1	1
E.E. 350	3			Restricted Electives	3	3	3
				Group Electives	3	6	7
				Total Hours	17	17	15

Restricted electives which may be taken by approval of the department head include the following courses: Economics 461; Electrical Engineering 511, 525, 531, 537, 538, 550, 567, 568, any acoustics course, 594, 595, 596; Business Management 340, 342; Physics 351, 352, 353, 555, 556, 557, 558, 559, 560; and Psychology 330, 335, 337.

Fifth Year Acoustical Option

The student will substitute four hours of general education for E.E. 433 of the fourth year in electrical engineering and in addition follow the course prescribed below:

	A	W	S		A	W	S
E.E. 581, 582, 583	3	3	3	Physics 558, 559, 560	2	2	2
E.E. 462, 463	4	4		Group Electives	2	2	8
E.E. 467, 468	2	2					
E.E. 591, 592, 593	1	1	1	Total Hours	17	17	17
Physics 555, 556, 557	3	3	3				

Restricted electives which may be taken by approval of the department head include the following courses: Electrical Engineering 433, 511, 525, 537, 538, 567, 568, 584, 585, 586, 594, 595, 596; Mechanical Engineering 327, 410.

Upper Division Courses

- 301, 302, 303 (101, 102, 103). Elements of Electrical Engineering.** (4:3:3 ea.) A.W.S. Prerequisites: Physics 211, 212, 213. Staff
Designed for students not majoring in electrical engineering. Study of direct and alternating current circuit theory and machinery, and electronics.
- 311, 312, 313 (151, 152, 153). Alternating-Current Circuits.** (3:3:0, 3:3:0, 4:3:3) A.W.S. Prerequisites: Physics 213, Mathematics 234, and Mathematics 315, 316, 317 concurrently. Staff
Steady-state alternating current circuits; vectors; complex algebra; series and parallel impedance networks; resonant circuits; non-sinusoidal waves; Fourier analysis. Series-parallel networks; coupled circuits; polyphase circuits; vector loci; network theorems; magnetics; elementary filters; pole-zero theory.
- 315 (New). Magnetic Amplifiers and Circuits.** (2:2:0) W. Prerequisites: E.E. 311, 355. Staff
Conventional magnetic circuits and applications to the saturable reactor and magnetic amplifier.
- 321 (131). Electrical Measurements.** (3:2:3) W. Prerequisites: Physics 211, 212, 213 and E.E. 312, 313 to be taken concurrently. Staff
Study of the theory, use, limitations, accuracy, and calibration of electrical instruments including bridges, recorders, indicators, and standard electrical meters.
- 322 (132). Electrical Measurements.** (2:2:0) S. Staff
Transducers, analogs, analog and digital read out systems.
- 350 (New). Solid-State Electricity.** (3:3:0) A. Prerequisite: Physics 213; E.E. 311 and Math 316 concurrently. Staff
Physical properties of crystalline solids. Lattice vibration and energy, dielectrics, conduction, band theory, semiconductors, secondary emission, magnetism, resonance, and relaxation.
- 411 (145). Electro-Mechanical Transients.** (2:2:0) A. Prerequisites: Mathematics 317, E.E. 313, C.E. 301 concurrently. Staff
Application of classical, operator, and Laplace transform methods in determining behavior of electrical and electro-mechanical elements under transient conditions.
- 431 (111). Direct-Current Machinery.** (2:2:0) S. Prerequisite: E.E. 313. Staff
Study of direct-current motors, generators, power distribution, applications.
- 432, 433, (133, 115). Alternating-Current Machinery.** (4:4:3 ea.) A.W. Prerequisite: E.E. 313. Staff

- Single and polyphase transformers; alternating-current motors and generators; applications. D.C. and A.C. machinery laboratory.
- 434 (New). Alternating Current Machinery Laboratory. (1:0:3) S. Required after E.E. 433. Staff
- 441, 442 (161, 162). Electronics (4:3:3 ea.) A.W. Prerequisite: E.E. 313. Staff
Study of electron dynamics; vacuum tube characteristics, rectifiers, amplifiers, oscillators, and special purpose tubes.
- 443 (163). Transistors. (3:2:3) S. Prerequisite: E.E. 442. Staff
Fundamentals of solid state conduction, simple and cascade transistor circuits, push-pull operation and oscillators.
- 460 (141). Electro-Magnetic Fields. (3:3:0) A. Prerequisites: E.E. 313, Mathematics 317. Staff
Study of static and dynamic electric and magnetic fields; both classical and vector mathematics will be employed.
- 461 (181). Transmission Lines. (4:4:0) S. Prerequisite: E.E. 443 concurrently. Staff
The general transmission line and transmission networks.
- 462 (182). Communication Systems. (4:4:0) A. Prerequisites: E.E. 443, 461. Staff
Circuits and systems used in television, radar, and radio engineering.
- 463 (183). U.H.F. Technique. (4:4:0) W. Prerequisite: E.E. 462. Staff
Lines, wave guides, antennas, wave propagation, generators.
- 467, 468 (184, 185). Communications Laboratory. (2:0:6 ea.) A.W. Parallels E.E. 462, 463. Staff
Devoted to building and testing circuits studied and designed in parallel theory courses.

Advanced Undergraduate or Graduate Courses

- 511 (275). Servomechanisms. (3:3:0) W. Prerequisites: E.E. 313, 411, 443; Mathematics 317. Staff
Theory and application of electrical and electro-mechanical automatic control systems.
- 525 (New). Analog and Digital Computers. (4:4:0) S. Staff
Analog function generators, summing circuits, operational amplifiers, integrating and differentiating circuits and their application. Boolean algebra, switching circuits, digital systems, shift circuits, adding and subtracting, multiplying and dividing with decimal numbers and computer organization and control.
- 531 (221). Power Systems. (3:3:0) A. Prerequisites: E.E. 433, 461. Staff
Study of power distribution and system protection.
- 537, 538 (192, 193). Advanced Laboratory. (1:0:3 ea.) S. Prerequisite: E.E. 463. Staff
Each of these courses constitutes a block of ten required experiments in the area of machinery control systems, machinery characteristics and power distribution methods. The student may register for either course or both courses simultaneously.
- 550 (147). Illumination. (2:2:0) A. Prerequisite: E.E. 313. Staff
Study of the principles and design of artificial illumination for various applications; lamp characteristics; measurements; costs.
- 567, 568 (190, 191). Advanced Laboratory. (1:0:3 ea.) S. Prerequisite: E.E. 463. Staff
Each of these courses constitutes a block of ten required experiments in

the area of U.H.F. Techniques, electronic circuits, communication systems, pulse forming networks, transmission lines, and filters. The student may register for either course or both courses simultaneously.

- 581, 582, 583 (168, 169, 170). **Psycho-Acoustics.** (3:3:0 ea.) A.W.S. Prerequisite: E.E. 443. Staff

Study of speech and hearing from a communication engineering viewpoint. Symmetrical analysis of speech and hearing processes will be developed. Known experimental facts about speech and hearing will be systematically studied and compared with calculated results. Methods of calculating and measuring articulation index of talker-listener pair when using any specified type of a communication system.

- 584, 585, 586 (267, 268, 269). **Advanced Musical Acoustics.** (2:2:0 ea.) A.W.S. Prerequisites: Physics 661, 662, 663. Staff

Technical study of acoustical behavior of different musical instruments, consideration of sound power output of single instruments and ensembles, stereophonic reproduction of music, possibilities of electronic musical instruments.

- 587 (167). **Architectural Acoustics.** (5:5:0) S. Prerequisites: Physics 211, 212, 213. Staff

Fundamental behavior of sound in rooms. Effects of shape and size upon perception of speech and music. Proper use of public address and sound re-inforcing systems, sound absorption and insulation properties of different kinds of room walls. Kinds and amounts of sound absorption materials to use in sound treatments of rooms and auditoriums.

- 591, 592, 593 (New). **Seminar and Field Trips.** (1:0:3 ea.) A.W.S. Prerequisite: fifth-year electrical engineer standing. Staff

Student and faculty presentation of special topics and subjects of current interest. Visits to Utah industries of varied types of electrical engineering applications.

- 594, 595, 596. (New). **Special Problems.** (Arr.) Staff
Registration by permission.

English

Professors: Christensen, Jacobs, Rice, Young.

Associate Professors: Britsch (chairman, 308 McKay), Carroll (emeritus), Cheney, B. B. Clark, Farnsworth, Hart, Larson, Monson, Spears, Tanner.

Assistant Professors: M. J. Clark, Craig, McKendrick, Olson, Rich, Smart, Thomas, Thomson, West.

Instructors: Alder, Bailey, Brady, Birmingham, Cox, Dunn (emeritus), Esplin, Evans, Grass, Horton, Madsen, Morrell, Statham, Thayer, Waterstradt, Wood.

Freshman English

(Marshall Craig, director)

Placement Test. All freshmen are required to take an English placement test at the time of registration.

Freshman Composition. To satisfy the university requirement for freshman composition, all students must complete one of the following sequences: English 111 (or 110), 112, 113, or English 115, 116. Assignment is made on the basis of performance in the placement test. Students who demonstrate a need for remedial work take English 110, 112, 113; students who demonstrate satisfactory ability take English 111, 112, 113; students who demonstrate exceptional ability take English 115, 116; students who demonstrate ability below that expected of college freshmen are required to take English 10 (special fee \$10.00) and to pass satisfactorily another placement test before registration in freshman composition.

Scope of Instruction

The English Department offers courses in writing, literature, and the English language as follows: writing, remedial and methodology courses; grammar, word study, and language courses; novel courses; drama courses; comparative and world literature courses; American literature courses; combined American and English literature courses; English literature courses; and single author courses.

Requirements for an English Major

The department requirement for a major is that a student complete at least forty-five hours in English beyond freshman composition. The following program is prescribed:

	Hours
A. 251—Fundamentals of English for Majors and Minors	5
B. 562—Major Figures of the American Renaissance	5
C. One of the following period courses in American Literature	5
561—American Literature to the Civil War	
563—American Literature since the Civil War	
D. English Period courses or authorized substitutes	16-20
A major is expected to complete classes in four of the five periods of English literature. At least two of the regular period courses (571, 572, 573, 574, 575) are required; substitutes may be taken as authorized below for one or both of the other two periods:	
1. 581 for 571; 2. 541 or 552 for 572; 3. 542 or 553 for 573; 4. 554 for 574; 5. 332 for 575.	
Note: If 552, 553, or 554 is taken, it may also be counted as filling the five-hour requirement in comparative or world literature.	
E. 382—Shakespeare	5

	Hours
F. Comparative or world literature, chosen from the list below	5
241, 242, 243—Masters of the Drama, Ancient to Modern	
552, 553, 554—The Renaissance, Neo-Classicism, and Romanticism in European Literature	
356, 357, 358—World Classics	
345—The Spirit of Tragedy in Literature	

G. Grammar, history of the English language, or literary criticism	5
This requirement, especially for those majors who plan to teach English in high school or college, will ordinarily be met by taking English grammar, although either of the other courses listed below may be substituted with the approval of the department chairman or the student's departmental adviser: English 221, 521, 550.	

H. 490—Senior Seminar for English Majors	2
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In addition to the university requirements for graduation and the departmental requirements for a major, each English major is expected to complete twenty-four hours in one foreign language.

Requirements for a Teaching Major in English

The requirements for the teaching major in English and for the regular majors are the same except that the foreign language requirements may be reduced or waived by the department to meet the special needs of some prospective teachers. Such reductions or waivers would necessitate, of course, the substitution of the Bachelor of Science degree for the degree of Bachelor of Arts.

English is one of the subjects comprising the composite major in language arts designed for prospective teachers.

Recommendations for a Teaching Minor in English

Following is the recommended minimum program beyond freshman composition for a student minoring in English and planning to teach English in high school:

	Hours
A. 251—Fundamentals of English for Majors and Minors	5
B. 221—English Grammar	5
C. 282 or 382—Shakespeare	3 or 5
D. Upper-division course(s) in American literature	5
562—Major Figures of the American Renaissance recommended as likely to be most useful.	
E. Upper-division course(s) in English literature	5
574—The Romantic Period or 575—The Victorian Period recommended as likely to be most useful.	

Graduate Work in English

A graduate student may major in either American or English literature; he may minor in a subject outside the English Department or in English literature, American literature, or language. It is assumed that anyone granted a Master of Arts degree in English will be well-grounded in the entire field of English and also well-trained in his graduate major and minor.

Each student should check the departmental requirements for an undergraduate major in English and make up the deficiencies in his undergraduate program insofar as possible. Among the forty-five hours required for a Master of Arts degree, each student must take the following courses:

	Hours
A. 615—Bibliography and Methods of Research	2
B. 525—Old English	5

The following courses must also be included if the student did not have them as an undergraduate:

A. 521—The History of the English Language	5
B. 550—The Criticism and Appreciation of Literature	5

In fulfilling the thesis requirements for a master's degree in English, a student may select any one of the following three options:

- (1) One long thesis on a topic demanding research, criticism, or both;
- (2) Three long papers written in three different areas of English or American language or literature and on topics demanding research, criticism, or both;
- (3) Two long papers written in two different areas of English or American language or literature and on topics demanding research, criticism, or both; and one long paper in the area of imaginative writing.

The work done under any of the above three options is under the direction of the student's advisory committee and must fulfill all of the requirements of form, date of submission, and binding that apply to regular master's theses.

For the graduate student who wishes to enter the Program for Writers, the department stipulates that four hours of "B" grade or better in the series of English 318, 319, and 320, or the equivalent directed experience in writing, be regarded as prerequisite for application to use imaginative writing as part of option (3) listed above. With this application, he must forward to the Graduate Committee in English samples of his best writing in order that the committee may determine whether he is qualified to use imaginative writing as part of his thesis requirement.

General Education

A student filling his general education requirement in literature under the humanities and aesthetics requirement may take any literature course for which he has the proper background. See also Humanities 101.

Remedial Courses

- 10 (A). Preparatory English. (0:3:0) A.W.S. Craig, Staff
Drill in essentials of English for all students not prepared for English 110 or 111. Students who complete course must pass placement test before registering for English 111. (Fee \$10.00)
- 15 (New). Remedial English for Juniors. (0:2:0) A.W.S. Monson, Staff
- 20 (X). Remedial Reading. (0:5:0) A.W.S. M. Clark, Olson
Non-credit service course utilizing modern clinical methods in developing reading speed and comprehension.
- 99 (201). Problems in Thesis Writing. (0:2:0) A.W. Staff
- 105, 106, 107 (5, 6, 7). English for Foreigners. (3:5:0 ea.) A.W.S. Staff
Service course for foreign students who are learning English. (This course may not be used to apply to an English minor, nor does it satisfy the freshman English requirement.)

Freshman Composition Courses

(These courses may not apply to the English minor.)

- 110 (1a). Composition and Reading. (3:5:0) A.W. Craig, Staff
Same course and credit as English 112, but meets two additional days a week. For students who need additional help in freshman composition.
- 111, 112, 113 (1, 2, 3). Composition and Reading. (3:3:0 ea.) A.W.S. Craig, Staff
Course in reading and writing designed for development of skills of ef-

fective writing, of critical awareness, of resources of the language, and of skill in reading rapidly and critically. Review of grammar, readings, weekly themes, and long library paper.

115, 116 (12, 13). Composition and Reading. (3:3:0 ea.) A.W.S.

Alternates course to English 111, 112, 113 designed for students who show superior ability and training in composition. Students who receive a grade of C or lower in English 116 will be required to take English 215 to complete the general education requirement for freshman composition.

Lower Division Courses

- 215 (15). Expository Writing. (3:3:0) A.W.S. Prerequisites: English 111, 112, 113 or 115, 116.** Craig, Staff
Basic composition course intended to develop clarity, precision, and style in factual writing.
- 216 (16). Technical Writing. (3:3:0). A.W.S. Prerequisites: English 111, 112, 113, or 115, 116.** Hart, Staff
Composition course intended to develop accuracy and skill in writing and documenting library or laboratory research reports.
- 218 (18). Imaginative Writing. (3:3:0) A.W.S. Prerequisites: English 111, 112, 113, or 115, 116.** Bailey, Staff
Composition course intended to develop expressive skill and power through writing of short stories, poems, dramas, and/or informal essays.
- 221 (21). English Grammar. (5:5:0) A.W.S. Prerequisites: English 111, 112, 113, or 115, 116.** Cheney, Larson
Service course intended to develop an effective vocabulary through assiduous study of prefixes, suffixes, and roots.
- 225 (25). Vocabulary Building. (3:3:0) A.W.S.** Young, Staff
- 226 (26). Semantics. (3:3:0) A.** Thomas, McKendrick
Study of function of words in written and spoken communication.
- 241 (41). Masters of the Drama, Ancient to Modern. (3:3:0) A. (G-HA)** Craig
Origin of the drama with emphasis on Greek and Roman dramatists.
- 242 (42). Masters of the Drama, Ancient to Modern. (3:3:0) W. (G-HA)** Craig
Medieval, renaissance, and early modern drama, both continental and English.
- 243 (43). Masters of the Drama, Ancient to Modern. (3:3:0) S. (G-HA)** Craig
Modern drama—continental, English, and American—stressing its national character and influence of earlier drama on the modern.
- 250 (50). Introduction to Literature. (4:4:0) A.W.S. (G-HA)** Farnsworth, Staff
Study of various types of literature—short story and novel, poetry, essay, biography, and drama—with a critical reading and analysis of significant examples of each type.
- 251 (51). Fundamentals of English for Majors and Minors. (5:5:0) A.W.S. Prerequisites: English 111, 112, 113, or 115, 116. Required of all English majors and recommended for English minors.** B. Clark, Staff
Basic course in literary appreciation and criticism, literary terminology, and writing. Should be taken in the sophomore year.
- 252 (52). Introduction to Poetry. (3:3:0) A.W.S. (G-HA)** Hart, Larson, Evans
Appreciation course in poetry, emphasizing critical reading and analysis of significant poems of various types.

- 253 (53). **Introduction to Drama.** (3:3:0) A.W.S. (G-HA) Monson, Tanner, Waterstradt
Appreciation course in drama, with attention given to various forms—tragedy, comedy, farce, melodrama, and modern problem play—and with a critical reading of famous examples of each type.
- 254 (54). **Introduction to Biography.** (3:3:0) W. (G-HA) Young
Study of short biographies of some famous statesmen, patriots, adventurers, scientists, inventors, painters, writers, and others, including Hitler, Napoleon III, George III, Edison, Wilson, Jefferson, Lincoln, John Brown, Goethe, Gauguin, the Curies, and Dolly Madison.
- 261 (61). **Masterpieces of American Literature.** (2:2:0) A. (G-HA) Thomson, Staff
Selected readings in American literature from colonial times to Emerson, with emphasis on Franklin, Poe, Hawthorne, and Emerson.
- 262 (62). **Masterpieces of American Literature.** (2:2:0) W. (G-HA) Thomson, Staff
Selected readings in American literature from Thoreau to Mark Twain, with emphasis on Thoreau, Melville, Whitman, and Mark Twain.
- 263 (63). **Masterpieces of American Literature.** (2:2:0) S. (G-HA) Thomson, Staff
Selected readings in American literature from about 1890 to the present.
- 271 (71). **Masterpieces of English Literature.** (2:2:0) S. (G-HA) Tanner, Staff
Selected reading in medieval and renaissance English literature, including selections from folk epic Beowulf, Chaucer's *Canterbury Tales*, Middle English folk ballads, and Shakespeare's plays and sonnets.
- 272 (72). **Masterpieces of English Literature.** (2:2:0) W. (G-HA) Tanner, Staff
Selected readings in 17th and 18th century English literature, including selections from 17th century lyrics and from works of Milton, Dryden, Pope, Swift, Gray, Blake, and Burns.
- 273 (73). **Masterpieces of English Literature.** (2:2:0) S. (G-HA) Tanner, Staff
Selected readings in 19th and 20th century English literature, including selections from great novels of these centuries and from the works of Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Browning, Arnold, Hardy, Yeats, and Eliot.
- 282 (82). **Shakespeare.** (3:3:0) A.W.S. (G-HA) Young, Staff
Appreciation course in Shakespeare, with an interpretive reading of from six to eight of his great dramas.

Upper Division Courses

- 318, 319, 320 (118). **Advanced Imaginative Writing.** (2:2:0 ea.) A.S. Pre-requisite: English 218 or special permission of the instructor or the department chairman. Cheney, Larson
Composition course intended to give experienced student writers opportunity to further develop their skills in writing poetry, fiction, and drama.
- 331 (131). **The English Novel to 1832.** (3:3:0) (G-HA) (Not given this year.) Rice
English prose fiction to beginning of Victorian period, with emphasis on Defoe, Richardson, Fielding, Smollett, Sterne, Scott, and Austen.
- 332 (132). **The English Novel from Dickens to Hardy.** (3:3:0) A. (G-HA) B. Clark
English novel from 1832 to 1900, with emphasis on Dickens, Thackeray, Trollope, the Brontës, George Eliot, and Hardy.
- 333 (133). **The Modern English Novel.** (3:3:0) S. (G-HA) B. Clark
English novel from 1890 to the present, with emphasis on Hardy, Con-

rad, Bennett, Galsworthy, Lawrence, Maugham, Joyce, Woolf, and several contemporary novelists.

- 335 (135). *The American Novel to Dreiser*. (3:3:0) A. (G-HA) Jacobs, Olson
Nineteenth century American novelists, with emphasis on Cooper, Hawthorne, Melville, Twain, Howells, and James.
- 336 (136). *The Modern American Novel*. (3:3:0) W. (G-HA) Jacobs
Twentieth century American novelists, with emphasis on Dreiser, Cather, Lewis, Hemingway, Faulkner, Steinbeck, Wolfe, and Fitzgerald.
- 345 (191). *The Spirit of Tragedy in Literature*. (4:4:0) W. (G-HA) Christensen
Study of tragedy as experienced in drama from the Greeks to the present time.
- 350 (150). *The Bible as Literature*. (3:3:0) A.W.S. (G-HA;G-R) Thomas, Staff
- 356 (156). *World Classics*. (3:3:0) A. (G-HA) Britsch, Staff
Greek epic and tragedy, with emphasis on works of Homer, Aeschylus, Sophocles, and Euripides in modern translation.
- 357 (157). *World Classics*. (3:3:0) W. (G-HA) Britsch, Staff
Latin and Italian epic, especially Virgil's Aeneid and Dante's Divine Comedy in modern translation.
- 358 (158). *World Classics*. (3:3:0) S. (G-HA) Britsch, Staff
European masterpieces of the modern era, with emphasis on works of Goethe, Schiller, Voltaire, Balzac, Flaubert, Pushkin, Turgenev, Tolstoy, and Ibsen, in translation.
- 359 (159). *The Short Story*. (3:3:0) A.S. (G-HA) Cheney, B. Clark
Critical study of selected great short stories—American, English, and European—with emphasis on 20th century stories.
- 366 (166). *Modern Poetry*. (3:3:0) A.S. (G-HA) Hart, Larson
Major English and American poets of the 20th century.
- 367 (167). *English and American Folk Poetry*. (3:3:0) W. (G-HA) Cheney
English and Scottish ballads and American folk song.
- 376 (176). *Twentieth Century English Literature*. (3:3:0) S. (G-HA) B. Clark, Hart, Larson
Major English poets, dramatists, and fiction writers of our century.
- 382 (182). *Shakespeare*. (5:5:0) W.S. (G-HA) Christensen
- 490 (195). *Senior Seminar for English Majors*. (2:2:0) A.W.S. Staff
Class will meet twice a week and will end with a written comprehensive examination.
- 495, 496, 497 (199a, b, c). *Individual Readings*. (1-6:2-12:0 ea.) A.W.S. Staff
Available only to English majors and students on foreign tours. English majors in residence will be limited to a maximum cumulative total of 3 credit hours, students on tour to a maximum total of 6 credit hours.

Advanced Undergraduate or Graduate Courses

- 500-509 (185). *Eminent American Writers*. (2:2:0 ea.) A.W.S. (G-HA) M. Clark, Staff
Different writers are treated each year in this series.
- 510-519 (186). *Eminent English Writers*. (2:2:0 ea.) A.W.S. (G-HA) McKendrick, Staff
Different writers are treated each year in this series.
- 521 (121). *History of the English Language*. (5:5:0) S. Christensen
Course descriptive of the English language in various stages of its development, with background of related historical events.

- 525 (221). **Old English.** (5:5:0) A. Young
Approval of instructor required for registration of an undergraduate.
- 526 (222). **Middle English.** (3:3:0) S. Monson, Christensen
Approval of instructor required for registration of an undergraduate.
- 541 (141). **English Drama to 1642.** (3:3:0) A. (G-HA) Young
Religious drama of the Middle Ages, court plays, and popular drama of the Renaissance, excluding Shakespeare.
- 542 (152). **Restoration and Eighteenth Century Drama.** (3:3:0) W. (G-HA) Rice
English drama from 1660 to 1800, with emphasis on high comedy, sentimental comedy, and heroic tragedy.
- 543 (143). **Modern English and American Drama.** (3:3:0) S. (G-HA) Tanner
Major English and American dramatists since 1890.
- 550 (190). **The Criticism and Appreciation of Literature.** (5:5:0) A. (G-HA) Thomas, Hart
Study of critical theories and standards of value.
- 552 (152). **The Renaissance in European Literature.** (5:5:0) A. (G-HA) Spears
Major writers of European Renaissance, including Montaigne, Boccaccio, Ariosto, Shakespeare, and Cervantes.
- 553 (153). **Neo-Classicism in European Literature.** (5:5:0) W. (G-HA) Spears
Major writers of 17th and 18th centuries in Europe, including Moliere, Voltaire, Dryden, Pope, Swift, Racine, Corneille, and Lessing.
- 554 (154). **Romanticism in European Literature.** (5:5:0) S. (G-HA) Spears
Major writers of Romantic Age in Europe, including Goethe, Rousseau, Wordsworth, Shelley, Keats, Victor Hugo, and Madame de Stael.
- 561 (161). **Early American Literature.** (5:5:0) A. (G-HA) Jacobs, Thomas, Thomson
American literature from beginning to Civil War, with emphasis on Colonial Puritanism, the Enlightenment, Nationalism and Romanticism. (Does not include authors studied in English 562.)
- 562 (162). **American Renaissance.** (5:5:0) A.W.S. (G-HA) Jacobs, Staff
Readings in major figures of the American Renaissance: Emerson, Hawthorne, Thoreau, Whitman, and Melville.
- 563 (163). **Later American Literature.** (5:5:0) W.S. (G-HA) M. Clark, Jacobs, Thomas, Thomson
American literature from Civil War to present, with emphasis on Realism, Local Color and Naturalism.
- 571 (171). **English Literature to 1500: the Medieval Period.** (5:5:0) A. (G-HA) Christensen
English literature from beginnings to 1500, with emphasis on its relationship to other European literatures.
- 572 (172). **English Literature from 1500 to 1660: the Renaissance Period.** (5:5:0) W. (G-HA) Young
English dramatic and non-dramatic poetry and English prose of Renaissance period, including Milton but excluding Shakespeare.
- 573 (173). **English Literature from 1660 to 1780: the Neo-Classical Period.** (5:5:0) S. (G-HA) Hart, Monson, Rice
English literature from Restoration through Augustan Age of Reason to beginnings of Romanticism, including works of Dryden, Defoe, Swift, Fielding, Pope, and Johnson.
- 574 (174). **English Literature from 1780 to 1832: the Romantic Period.** (5:5:0) A.W. (G-HA) Cheney, Tanner, B. Clark

English literature of Age of Romanticism, including works of Blake, Wordsworth, Coleridge, Scott, Lamb, Byron, Shelley, and Keats.

- 575 (175). English Literature from 1832 to 1900: the Victorian Period. (5:5:0) W.S. (G-HA) Farnsworth, Britsch, B. Clark, Hart
English literature of middle and later 19th century, including works of Carlyle, Ruskin, Dickens, Browning, Tennyson, Arnold, the Rossettis, Morris, Swinburne, Meredith, and Hardy.
- 581 (181). Chaucer. (4:4:0) W. (G-HA) Christensen
- 583 (183). Milton. (3:3:0) A. (G-HA) Christensen
- 587 (187). Matthew Arnold. (3:3:0) S. (G-HA) Christensen

ENGLISH EDUCATION

- 377 (120). Basic Classroom Procedures. (4:4:3) S. Prerequisites: E.R.S. 305 or equivalent. West
For course description and fee see Education: Instruction 377.
- 478 (138). Unit Planning and Teaching. (4:3:5) A.W.S. Prerequisite: Education: Instruction 377 or English Education 377. West
For course description and fee see Education: Instruction 478.
- 479 (139). Secondary Student Teaching. (7:1:20) A.W.S. Prerequisite: Education: Instruction 478 or English Education 478. West
For course description and fee see Education: Instruction 479.
- 669 (Ed. Inst. 228). Teaching English in Secondary Schools. (3:3:0) S. West

Graduate Courses

- 615 (215). Bibliography and Methods of Research. (2:2:0) A. Larson
- 625 (223). Beowulf. (3:3:0) W. McKendrick
- 631 (231). The English Novel. (3:3:0) A. B. Clark
- 635 (235). The American Novel. (3:3:0) W. Smart
- 641 (241). The English Drama. (3:3:0) S. Craig
- 661 (261). Colonialism and Puritanism in American Literature. (3:3:0) S. Jacobs
- 662 (262). Romanticism in American Literature. (3:3:0) A. Thomas
- 663 (263). Transcendentalism in American Literature. (3:3:0) W. Jacobs, Thomas, Thomson
- 664 (264). Realism and Naturalism in American Literature. (3:3:0) S. Jacobs, Thomas, Thomson
- 671 (271). The Medieval Period in English Literature. (3:3:0) A. Christensen
- 672 (272). The Renaissance in English Literature. (3:3:0) W. Young, Larson
- 673 (273). Neo-Classicism in English Literature. (3:3:0) W. Hart, Rice
- 674 (274). Romanticism in English Literature. (3:3:0) A. B. Clark
- 675 (275). The Victorian Age in English Literature. (3:3:0) S. Farnsworth
- 682 (282). Shakespeare. (3:3:0) Not given this year. Hart
- 695 (299). Individual Readings in English. (1-3:2-6:0) A.W.S. Staff
- 699 (300). Thesis for Master's Degree. (Arr.) A.W.S. Staff

Entomology

(See Department of Zoology and Entomology.)

Family Living, General

Virginia Poulson (in charge, 2218 FLC).

A non-departmental composite major-minor is offered in the broad field of Family Living. Completion of a minimum of 60 hours of course work distributed among five departments in the College is required. This is in addition to the University requirements and the out-of-college courses that are also to be completed by all students who wish to graduate from the College. Students who are uncertain as to their specific interest often begin work in the general field, but by the end of their freshman year, they may select a major in one of the departments in the College: Clothing and Textiles, Economics and Management of the Home, Food and Nutrition, Homemaking Education, Housing and Design, or Human Development and Family Relationships. An elementary teaching certificate may be obtained with a major in Human Development and Family Relationships if appropriate courses in the College of Education are selected.

Students in the Family Living, General, program may prepare themselves for jobs in the field of retailing or of writing, related to family living. Before deciding to remain in the program, students should have in mind specific jobs in which they are interested, and they should check carefully with their advisers to be certain that jobs are available in the field and in the section of the country in which they wish to live. As is true for the majors in the departments of the college, the successful completion of appropriate courses in this program should prepare a student to assume the responsibilities of marriage and also to earn a living in a field related to family living. An undirected, non-specialized program, however, may not prepare one to earn a living.

Suggested Program

Freshman Year		Sophomore Year	
	Hours		Hours
Religion**	6	Religion**	6
English** (determined by placement test)	9	Bacteriology 121*	4
Physical Education and Health**	5	Zoology 105 or 164*	5
Art 110*	2	Economics 101*	
Chemistry 101, 102, or 105, 106, 107	9 or 15	or Agr. Econ. 101	5
Physics 104*	3	Nursing 288	2
Psychology 111*	5	Clothing and Textiles 125	3
Family Living 101	1	Food and Nutrition 210, 240***, 255, 256, 264	4-8
Clothing and Textiles 105, 110, 115	2-3	Housing and Design 120, 135	2-5
Economics and Management of the Home 130	2-3	Human Development and Family Relationships 210, 211, 261	4-6
Food and Nutrition 110	4	Electives: Optional courses not elected freshman year, art, journalism, accounting business education and office management, speech, sociology	6-8
Human Development and Family Relationships 160	2		

*Required

**Required year listed

***Students who plan to elect Food and Nutrition 210 or 264 should take Food and Nutrition 340, not Food and Nutrition 240.

Junior and Senior Years

Economics and Management of the Home 470* 4 credit hours

Retailing: Students who enjoy selling may help prepare themselves for responsible positions by finding selling jobs during vacation periods. Course work

should include Accounting 101; Business Management 347, 455, 480, 481, 557; Psychology 205; Educational Psychology 304. In addition, a broad background of courses in clothing and textiles and housing and design should be elected.

Writing or Journalism: Students who are interested in writing should volunteer for work on student publications and in addition elect the following courses: Psychology 205; educational psychology. A broad background in all areas of family living is desirable. Journalism 101 (G-HA), 211, 321, 561, 566, 571; electives (5); Bacteriology 361;

Lower Division Course

- 101 (5). Orientation to Family Living. (1:2:0)** A. Recommended for all freshmen in the College. Staff

Advised for students majoring in the College of Family Living. Information needed to assist the student to plan for herself while in college; the scope of family living (home economics); educational, cultural, religious and social opportunities, and library facilities on campus; investigation of and planning for a vocation in family living.

Family Relationships

(See courses in Human Development and Family Relationships.)

Field Crop Production

(See courses in Agronomy.)

Finance and Banking

(See courses in Business Management.)

Food and Nutrition

Professors: Pfund, Morris.

Associate Professors: Bennion (chairman, 2218B SFLC), MacNair.

Instructors: Bowman, M. Bryner, Durrant, Kondo.

Special Instructors: S. Thomas, I. Thomson.

The Department of Food and Nutrition aims to help the student understand the basic principles which underlie (1) the role played by food in the maintenance of optimum health and (2) the preparation of food of high culinary and nutritive quality. Application of the basic principles of nutrition is made through the planning, preparation, serving, and evaluation of attractive and nourishing family meals and through the preparation and evaluation of single items under experimentally controlled conditions. The economics of buying and the wise management of time and energy are emphasized.

Courses in this department provide background for training in such professional fields as hospital dietetics, public health nutrition, school lunch or restaurant administration, test kitchen work, food demonstration, and research.

For majors in food and nutrition a minimum of 30 credit hours in the department is required. For graduation from the College of Family Living these hours must be combined with enough credits in the college to total 60 hours. Included shall be

	Hours
Clothing and Textiles	4
Economics and Management of the Home	3
Housing and Design	3
Human Development and Family Relationships	6

Suggested Program for Majors

Freshman Year		Junior Year	
	Hours		Hours
Religion	6	Religion	6
English (determined by placement test)	9	History 180	5
Physical Educ. and Health	5	Humanities and Aesthetics	3
Art 110	2	Econ. and Mgt. of the Home	3
Chemistry	9-10	Housing and Design	3
Bacteriology	4	Family Living (courses toward 60 credit-hour requirement)	6-8
Psychology	5	Food and Nutr. 335, 336, 340	12
Family Living 101	1	Food and Nutrition (courses toward major)	2-3
Food and Nutrition 110	4	Electives (selected from list following or others)	6-8
Clothing and Textiles	2-3		
Sophomore Year		Senior Year	
	Hours		Hours
Religion	6	Religion	6
Chemistry	5	Humanities and Aesthetics	3
Physics 104	3	Clothing and Textiles	2
Zoology 105 or 164	5	Human Dev. and Family Rel.	3
Economics 101 or Ag. Econ. 101	5	Food and Nutrition 564, 590	6
Humanities and Aesthetics	7	Food and Nutrition (courses toward major)	10-12
Human Dev. and Family Rel.	3-4	Electives (selected from list following or others)	15
Food and Nutrition 264	4		
Electives	10		

Food and Nutrition 210, 330, 345*, 455*, 470*, 472*, 474*, 560, 562, 594, 595.

Students preparing for a dietetic internship must elect food and nutrition courses marked (*); Accounting 101; Chemistry 234; Homemaking Education 381, 382; sociology or additional psychology or economics, 4 hours.

For positions in hospital dietetics, a postgraduate internship is required. Certain centers have been approved by the American Dietetic Association to give internships and training. A list of these centers, as printed by the American Dietetic Association, is available in the office of the department chairman. These courses are ordinarily twelve months in length.

Students preparing for positions in business should elect Educational Research and Services 304, Education: Instruction 305, Homemaking Education 381 and 382, Journalism 101 (G-HA) and Speech 101 or 102.

The courses in this department are planned to be of value to both men and women.

Courses in other departments that might be of interest to students in food and nutrition are Bacteriology 361, Chemistry 220, Horticulture 112, Journalism 101, 211, 571, and Business Management 347.

Lower Division Courses

- 110 (10). Introductory Food and Nutrition.** (4:3:4) A.W.S. Open to all students. Staff

The importance of food in maintaining good health, consideration of nutritive value in relation to the cost of food, and laboratory experience in the preparation and use of common foods for family meals.

- 115 (5). Essentials of Nutrition.** (3:3:0) A.W.S. For non-majors in College of Family Living. Majors should elect Food and Nutrition 110 instead. Staff
Basic concepts of human nutrition and their application in achievement and maintenance of optimum health.

- 124 (20). Food and Nutrition.** (1:2:2) Five weeks only. W. Elect with Clothing and Textiles 124. Designed for men students only. Bryner

To help young men acquire some skill in preparation of quick, easy, nutritious meals and recipes for "batching." To help men acquire some confidence in the discharge of a host's and husband's responsibilities: introductions, table etiquette, conversation, carving.

- 130 (50). Food Preservation.** (2:2:2) A. Open to all students. Bowman
Basic theory and practice in canning and freezing of fruits, vegetables, and meats. Comparison of preserved products with fresh products.

- 170 (70). Food Management for Large Groups.** (2:1:4) S. Open to men and women. Durrant

Designed to give assistance in planning and to give some practical experience in preparation of food for community groups. Emphasis on organization and management and adaptation to available facilities. Of particular interest to members or potential members of Church committees and to prospective teachers.

- 210 (110). Food Preparation.** (3:1:4) W. Prerequisite: Food and Nutrition 110. Kondo

Different ways of preparing and using a wide variety of foods. Preparation of some foreign dishes.

- 240 (40). Meal Management.** (4:3:4) S. Prerequisite: Food and Nutrition 110. Majors in food and nutrition and students planning to teach homemaking should register for Food and Nutrition 340. Fee \$3.00. Staff

Problems involved in selection of food for nutritionally adequate family meals with emphasis on those of low cost. Economics of buying and or-

ganization and management of time and energy in planning and preparation of meals. Experience in using various types of service.

- 245 (New). **Nutrition of Mother and Child.** (3:3:0) W. Open to all students. Staff
Designed to give students an understanding of basic principles of nutrition particularly as applied to feeding of expectant mothers, infants, and children.
- 255 (105). **Fundamentals of Nutrition.** (3:3:0) A.S. Prerequisites: Food and Nutrition 110, Zoology 105 or 164, and Chemistry 102. For non-majors. Majors should elect Food and Nutrition 335 instead. Morris
Basic concepts of human nutrition at all ages. Achievement and maintenance of optimum health for all family members. Relation of cost to nutritive value.
- 256 (106). **Fundamentals of Nutrition, Laboratory.** (1:0:2) A.S. Designed to accompany Food and Nutrition 255. For non-majors. Majors should elect Food and Nutrition 335 instead. Morris
Experience involving a study of food portions, their cost, and their value in supplying body needs.
- 264 (120). **Introduction to Experimental Cookery.** (3:3:0) W.S. Prerequisites: Food and Nutrition 110 and Chemistry 102. To be taken concurrently with Food and Nutrition 265. Bennion
How and whys of food preparation. An understanding of the purpose of ingredients and the procedure used in the preparation of some common foods. Comparison of products prepared when kind or proportion of ingredients or method of manipulation is varied.
- 265 (New). **Introduction to Experimental Cookery, Laboratory.** (2:0:4) W.S. To be taken concurrently with Food and Nutrition 264. Staff

Upper Division Courses

- 330 (150). **Food Preservation.** (2:2:2) A. Prerequisites: Chemistry 101, Bacteriology 121, and Food and Nutrition 264. Bowman
Underlying theory of and practice in the canning and freezing of fruits, vegetables, and meats; in the freezing of cooked products; in jelly-making and pickling. Comparison of products with fresh produce.
- 335, 336 (New). **Nutrition.** (4:3:2 ea.) W.S. Prerequisites: Food and Nutrition 110, Zoology 105 or 164, and Chemistry 284. Morris
A study of the essential nutrients and their functions in nutrition; how to determine and satisfy the food needs of the normal individual.
- 340 (140). **Meal Management.** (4:3:4) A.W. Prerequisites: Economics 101, Food and Nutrition 255 or 335, and 264. Economics and Management of the Home 325 recommended. Fee \$3.00. Bryner
Application of fundamentals of nutrition to selection of food for family meals. Budgeting of the food dollar in families of different income levels. Organization and management of time and energy in planning and preparation of meals. Experience in use of various types of service.
- 345 (145). **Nutrition of Mother and Child.** (3:3:0) S. Prerequisite: Food and Nutrition 255 or 335. Staff
Application of principles of nutrition to feeding of expectant mothers, infants, and children.
- 455 (155). **Nutrition in Disease.** (3:2:2) A. Prerequisite: Food and Nutrition 336 and Chemistry 284. Staff
The role of good nutrition in times of stress and special need and as a therapeutic aid in treatment of disease.
- 470 (170). **Quantity Food Preparation.** (5:3:6) W. Prerequisites: Food and Nutrition 264 and 340. Durrant

Practical experience in menu planning and food preparation for large groups. Use, operation, and maintenance of equipment.

- 472 (172). Food Management in Institutions.** (4:3:6) W. Prerequisite or concurrent Food and Nutrition 470. Durrant

Administrative problems of food-service operation. Management of financial and personnel problems, planning of institution kitchens, and selection of equipment. Field trips, observations, and practical experience to be arranged.

- 474 (New). Food Purchasing for Institutions.** (2:2:0) S. Prerequisites: Food and Nutrition 470 and 472. Durrant

Procedures involved in selection and purchase of food products for institutional use.

Advanced Undergraduate or Graduate Courses

- 560 (160). Chemistry Applied to Food.** (2:2:0) W. Prerequisite: Chemistry 101. College of Family Living students: Food and Nutrition 264 also. Offered 1958 and alternate years. Pfund

An understanding of quality in prepared food such as biscuits, muffins, other quick breads, candies, some frozen desserts, vegetables, and canned products. Practices followed in preparation are related to physiochemical properties of gases, liquids, solids, and solutions; pH, hydrogen-ion concentration, and titratable acidity and to chemical reactions involved.

- 561 (161). Chemistry Applied to Food, Laboratory.** (1:0:2) W. Designed to accompany Food and Nutrition 560. Offered 1958 and alternate years. Staff

- 562 (162). Chemistry Applied to Food.** (2:2:0) S. Prerequisite: Chemistry 103 or 284. College of Family Living students: Food and Nutrition 264 also. Offered 1958 and alternate years. Pfund

An understanding of quality in prepared food such as meat, fish, eggs and egg products, cheese dishes, gelatin dishes, bread, cake, and pastry. Composition of food and practices followed in its preparation are related to its colloidal nature and to chemical and bio-chemical reactions involved.

- 563 (163). Chemistry Applied to Food, Laboratory.** (1:0:2) S. Designed to accompany Food and Nutrition 562. Offered 1958 and alternate years. Staff

- 564 (122). Experimental Cookery.** (4:3:4) A. Prerequisite: Food and Nutrition 264. Bennion

Continuation of Food and Nutrition 264. More emphasis upon experimental techniques used in measuring quality of food.

- 590 (180). Readings in Food and Nutrition.** (2:2:0) A. Prerequisite or concurrent: Food and Nutrition 564 and 336 or consent of instructor. Staff

- 594 (194). Special Problems in Food.** (1-3:0:3-9) W.S. Prerequisite: permission of instructor and chairman of department. For students who have completed at least 15 hours in food and nutrition, including Food and Nutrition 590. Staff

Independent study of a special problem in food under direction of an instructor.

- 595 (195). Special Problems in Nutrition.** (1-3:0:3-9) W.S. Prerequisite: permission of instructor and chairman of department. For students who have completed at least 15 hours in food and nutrition, including Food and Nutrition 590. Staff

Independent study of a special problem in nutrition under direction of an instructor.

Graduate Courses

- 622 (222). Recent Advances in Foods.** (2:2:0) Su., 1959. Prerequisite: Food and Nutrition 264 or its equivalent. Bennion

- 625 (225). Recent Advances in Nutrition. (2:2:0) Su., 1958. Prerequisite: Food and Nutrition 336 or its equivalent. Staff
- 641 (241). Problems in Teaching Food and Nutrition. (2-3 credits) Su. 1959. Two or three-week workshop. Prerequisite: Two years' experience teaching food and nutrition or home economics. Bennion
- 644 (244). Science and Experimental Foods. (3:2:2) Su. Not given this year. Prerequisite: Food and Nutrition 264. Pfund
Protein foods; simple colloidal systems: gels, emulsions, and foams.
- 646 (246). Science and Experimental Foods. (3:2:2) Su., 1958. Prerequisite: Food and Nutrition 264. Pfund
Batters, doughs, and starch-thickened products.
- 648 (248). Science and Experimental Foods. (3:2:2) Su., 1959. Prerequisite: Food and Nutrition 264. Staff
Carbohydrate foods and frozen mixtures.
- 684 (294). Methods of Research in Nutrition. (2-3:1-2:4-6) Su. Not given this year. Prerequisite: Food and Nutrition 435. Staff
- 685 (295). Methods of Research in Food. (2-3:1-2:4-6) Su. Not given this year. Prerequisites: Two of the following: Food and Nutrition 644, 646, 648. Staff
- 694 (297). Independent Project in Food and Nutrition. (1-4:0:3-12) A.W.S.Su. Prerequisites: Food and Nutrition 684 or 685. Staff
- 696 (298). Graduate Seminar in Food. (1-2:2-4:0) Su. Staff
- 697 (299). Graduate Seminar in Nutrition. (1-2:2-4:0) Su. Staff
- 698 (New). Field Project or Action Research. Arr. A.W.S.Su. Staff
- 699 (300). Thesis for Master's Degree. Arr. Staff

French

(See courses in Languages.)

Geography

Assistant Professors: Tuttle (chairman, 366 McK), Duke, Fisher, Layton, Reeder.

The Department of Geography serves three classes of students: (1) professional major students, (2) non-professional major students who wish to build a broad cultural education around a central interest in geography, (3) students majoring in other fields who wish some acquaintance with the contribution of geography to the understanding of the world and its problems.

For majors, the department provides work in the following general fields of specialization: area analysis, cartography, regional planning.

The following courses in geography are required for a major:

Lower Division. Geography 105, 223, 275. Geology 101 and 102 or 111.

Upper Division. Geography 310, 401, 570; at least two of the following regional courses: 420, 430, 440, 450, 460, at least two of the following systematic courses: 560, 565, 580, 581, 582, 583, 584, 598 (seminar); and electives in geography to make a total of 45 hours.

Lower Division Courses

- 105 (11). Introduction to Geography.** (5:5:0) A.W.S. (G-SS). Tuttle
General survey of man's use of his natural environment including a study of landforms, climates, soil, natural resources.
- 110 (12). Geography in World Affairs.** (5:5:0) A.W.S. (G-SS) Duke
Introduction to world geography emphasizing regions, resources, and economic activities of major political areas of the world.
- 121 (21). Geography of Utah.** (3:3:0) W. Layton
Detailed regional study of the state, with special emphasis on cultural and economic relationships of Utah to the nation.
- 223 (23). Economic Geography.** (5:5:0) A.S. (G-SS) Layton
Brief survey of the world's resource pattern. Origin, importance and movement of major commodities in world affairs.
- 275 (75). Map Reading.** (3:2:2) A. Layton
Maps as tools for teaching and research. Sources of maps and interpretation of map data.

Upper Division Courses

- 303 103). Map Drawing.** (3:1:4) W. Layton
Maps as a means of recording information. Methods of illustrating various types of data and preparation of maps for reproduction and publications.
- 305 (105). Physiography of North America.** (3:3:0) S. Prerequisite: consent of instructor. Tuttle
Study of characteristics of landforms of the continent.
- 310 (110). Geography of North America.** (5:5:0) A. (G-SS) Tuttle
Geography of the United States, Alaska, and Canada, including study of climates, landforms, natural resources, agriculture, and industries.
- 360 (New). World Mineral Resources.** (2:2:0) S. Layton
Geography of reserves, production, and uses of the world's important metallic and non-metallic minerals.

- 401 (100). **Geography of Climates.** (3:3:0) A. Prerequisite: consent of instructor. Tuttle
Study of climate, one of the most important of all geographic factors, including climatic elements, controls, distribution and classification.
- 420 (120). **Latin America.** (5:5:0) A. Layton
Physical and cultural landscapes of geographic regions of South and Central America.
- 430 (130). **Europe.** (5:5:0) A. (G-SS) Duke
Study of the land and how man is utilizing natural and human resources of Europe. Emphasis on human geography of major political regions.
- 440 (140). **Asia.** (5:5:0) W. Prerequisite: consent of instructor. Tuttle
Geography of one-third of the earth and two-thirds of its people. Man's use of his natural environment on the world's largest continent.
- 450 (150). **Africa.** (5:5:0) W. Duke
Systematic regional treatment of physical, economic, political and cultural geography of Africa.
- 460 (New). **Australia and New Zealand.** (3:3:0) S. Duke
Physical and cultural geography of Australia, Tasmania and New Zealand.
- 490, 491, 492. (195). **Readings.** (1:1:0 ea.) A.W.S. For majors only. Staff
- 495 (New). **Special Problems.** (1-3:1-3:2-6) A.W.S. For majors only. Staff

Advanced Undergraduate or Graduate Courses

- 560 (160). **Industrial Geography.** (5:5:0) S. Prerequisite: Geography 223 or 360. Layton
Analysis of major industries in the United States with regard to location of raw materials, present technology and markets.
- 565 (165). **Urban Geography.** (3:3:0) W. Layton
Survey of location, development, and functions of various urban areas.
- 570 (New). **Geographic Field Techniques.** (3:1:4) S. Duke
Techniques of observation, field mapping and report writing. Consideration of problems in geography of local region. Required of all majors.
- 584 (176). **Political Geography.** (3:3:0) S. Prerequisite: consent of instructor. Duke
Study of location, human and natural resources, economics, politics, and other factors which contribute to foundation of national power for world's major areas.
- 598 (199). **Seminar.** (1:1:0) A.W.S. Staff

Graduate Courses

- 605, 606, 607 (205, 206, 207). **Research.** (1-2:1-2:0 ea.) A.W.S. For majors only. Staff
- 611 (211). **United States.** (3:3:0) W. Prerequisite: Geography 310. Tuttle
- 621 (221). **South America.** (3:3:0) W. Prerequisite: Geography 420. Layton
- 622 (222). **Caribbean Area.** (3:3:0) S. Prerequisite: Geography 420. Layton
- 631 (231). **Western Europe and the Mediterranean.** (3:3:0) A. Prerequisite: Geography 430. Duke
- 632 (232). **Eastern Europe and the U.S.S.R.** (3:3:0) S. Prerequisite: Geography 430. Tuttle
- 641 (241). **Orient.** (3:3:0) S. Prerequisite: Geography 440. Tuttle

- 680 (290). Geography of Underdeveloped Areas.** (3:3:0) W. Prerequisite: consent of instructor. Duke
- 690, 691, 692 (295). Readings.** (1:1:0 ea.) A.W.S. For majors only. Staff
- 695 (New). Special Problems.** (1-3:1-3:2-6) A.W.S. For majors only. Staff
- 698 (299). Graduate Seminar.** (1:1:0) A.W.S. Staff
- 699 (300). Thesis for Master's Degree.** (Arr.) Staff

These courses also count in Geography:

- Political Science 580. Foundations of National Power (The Americas).** (3:3:0)
- Political Science 581. Foundations of National Power (Europe).** (3:3:0)
- Political Science 582. Foundations of National Power (Near and Middle East).** (3:3:0)
- Political Science 583. Foundations of National Power (Far East and Pacific).** (3:3:0)
- History 663. Historical Geography of the United States.** (3:3:0)

Geology and Geological Engineering Science

Professors: Bullock (chairman, 289 ESC), Bissell, G. H. Hansen.

Associate Professor: Hintze.

Assistant Professors: Bushman, Phillips, Rigby.

Instructor: Brimhall.

Curator: Owens.

It is expected that a student intending to major in geology shall have met the general entrance requirements of the College of Physical and Engineering Sciences. All students majoring in geology are required to complete the following courses, or their equivalents at another institution, to obtain the bachelor's degree: Geology 111, 112, 113, 251, 252, 253, 311, 312, 313, 410, 460, 470, and 480. No more than two required geology courses can be taken during any one quarter. Mathematics 111, 112, 231, Chemistry 111, 112, 113, and Physics 111, 112, 113, or 211, 212, 213, are required of all geology majors. Starred courses are recommended. The following courses are recommended to fulfill partially the group requirements: Botany 112, Zoology 105, History 170, Geography 223, and Archaeology 150.

Mathematics 232, 233, and 234 are required of all students majoring in geological engineering, geophysics, or geochemistry, and are strongly recommended for all geology majors. Requirements for students intending to teach in the elementary and secondary school are listed under composite majors in mathematics and physical science under the College of Education.

The Department of Geology offers training for the master's degree and the degree of Doctor of Philosophy, with specialization in various fields of geology. The graduate student is urged to acquire a broad foundation in geology, and to secure adequate training in field work before he concentrates on a chosen branch of the subject. To this end certain fundamental course work is recommended for all students. The course offerings are sufficiently varied and complete in order that the student may select courses according to his needs and inclinations in consultation with his adviser.

It is expected that graduate students will meet all the general requirements for advanced degrees as outlined by the Graduate School. The responsibility of meeting these requirements rests with the students. Thesis work, intended to be investigative in character, must be of professional caliber. It is expected that the candidate for an advanced degree will make original contributions, develop new ideas, and complete a thesis or dissertation suitable for publication.

The Department of Geology offers instruction in three broad divisions of geology, with the following course offerings in each division: (1) economic geology and mineralogy—Geology 520, 525, 540, 563, 621, 622, 640, 641, 645, 646, 651, 652, 653, 655, 656, 661, 662, 665; (2) stratigraphy, sedimentation, and paleontology—Geology 575, 576, 670, 671, 672, 678, 680, 682, 683, 684, 685; and (3) structural, field and dynamic geology—Geology 503, 506, 511, 512, 530, 535, 610, 615, 617, 673.

A student may select any one of the three divisions for a major. He may elect one or both of the remaining divisions for his minor(s). Geology 505 is required of all graduate students, but may apply toward their majors. Geology 696, 698, 699, and 799 are variable credit courses commensurate with work completed in each of these areas. A student should not register for Geology 699 or 799 until he has essentially completed his research, and is prepared to write his thesis or dissertation.

Master's Degree. (For general requirements see Graduate School Catalog.) Requirements for a master's degree in geology include: (1) at least twenty-three

hours of formal course work in the major field, and at least fifteen hours of formal course work in one or two minor fields; (2) a general qualifying examination at the beginning of the graduate program; (3) a thesis embodying the results of research under a faculty member's supervision; and (4) a final comprehensive examination on the graduate course work and the research thesis.

Doctor of Philosophy Degree. (For general requirements see Graduate School Catalog.) Requirements for a Doctor of Philosophy degree in geology include: (1) a minimum of forty hours of formal course work in the major field, and a minimum of twenty-five hours of formal course work in each of two minor fields (One of the minors may be in a related field outside of the Department of Geology, in which upper division and graduate courses will be acceptable); (2) one degree or one year of acceptable graduate study at another institution; (3) a comprehensive examination after ninety hours of graduate work and at least one academic year prior to graduation; (4) a dissertation embodying the results of original research; and (5) at the close of his final year of study, the candidate will defend his dissertation before a formally appointed committee.

SUGGESTED CURRICULUM FOR GEOLOGY MAJORS

Freshman Year				Sophomore Year			
	A	W	S		A	W	S
Geology 111, 112, 113, or				Geology 111, 112, 113 or			
Chemistry 111, 112, 113 ..	5	5	5	Chemistry 111, 112, 113 ..	5	5	5
Mathematics 111, 112, 231	5	5	5	Geology 251, 252, 253	3	3	3
English 111, 112, 113	3	3	3	*Mathematics 232, 233, 234 ..	5	5	5
Phys. Ed. and Health	1	1	2	Religion	2	2	2
Religion	2	2	2	Group Requirements and			
				Electives	3-8	3-8	3-8
	16	16	17		18	18	18
Junior Year				Summer School			
	A	W	S				
Geology 311, 312, 313	5	4	3	Geology 410 (Geology			
*Geology 305	3			Summer Field Camp)	6	hours	
Physics 111, 112, 113				Senior Year			
or 211,212,213	5	5	5		A	W	S
Religion	2	2	2	Geology 480, 470, 460	4	4	4
Group Requirements and				*Geology 505, 450	2	4	
Electives	5	3-6	7	Religion	2	2	2
	17	17	17	Electives (and group require-	11	9	7
				ments not filled)	17	17	17

SUGGESTED CURRICULUM OF GEOLOGICAL ENGINEERING

Freshman Year

(Same as all Engineering Students)

Sophomore Year

(Same as all Engineering Students)

Junior Year

	A	W	S
Geology 111, 112, 113	5	5	5
Geology 251, 252, 253	3	3	3
Civil Engineering 320	5		
Civil Eng. 301, 302, 303	5	5	5
Religion	4	2	
Electives	1	3	
	18	18	18

Senior Year

	A	W	S
Geology 311, 312, 313	5	4	3
Geology 480, 470, 460	4	4	4
Geology 540	4		
Elec. Eng. 301, 302, 303	4	4	4
Religion	4	2	
Electives	1	2	5
	18	18	18

Summer School		Geology 645, 646, 450	3	3	4
Geology 410 (Geology Summer		Geology 530, 640, 641	3	4	4
Field Camp)	6 hours	Geology 520, 625, 661, or			
Fifth Year		Geology 660, 661, 662	5-3	4-3	5-4
	A W S	Electives	2-4	2-3	0-1
Chemistry 221, 222, 214	5 5 5		<hr/>	<hr/>	<hr/>
			18	18	18

Lower Division Courses

- 101 (1). Introduction to Geology. (3:3:0) A.W.S. (G-PS)** Staff
 A cultural non-technical course dealing with physical geology. Designed for the non-science student who desires a broad introduction to earth science and a greater appreciation of one's surroundings. Annual two-day field trip through central and southern Utah (Bryce and Zion Canyons) is sponsored each spring for all Geology 101 and 103 students of the year. May be taken with or without Geology 102.
- 102 (2). Introduction to Geology Laboratory. (1:0:2) A.W.S. (G-PS)** Staff
 Laboratory course (including a local field trip) in which common rock and ore-forming minerals, common rocks, and a few maps will be studied. Designed to accompany Geology 101, 110 and 111 and should not be taken separately.
- 103 (3). Life of the Past. (3:3:0) A.W.S. (G-PS)** Rigby
 Cultural non-technical course in historical geology. Designed for the non-science student who desires an understanding of life forms and general historical events of the geologic past. Annual field trip. See Geology 101.
- 110 (91). Geology for Engineers. (3:3:0) W.S.** Staff
 Study of geologic principles which relate to engineering practice. Geology 102 is required to accompany this course. Designed for all engineering students except the geological engineers.
- 111 (11). Physical Geology. (4:4:0) A.W. (G-PS)** Brimhall
 Comprehensive course covering the field of physical geology. Common rock and ore-forming minerals, common rocks, and maps will be studied in the laboratory. Geology 102 is required to accompany this course. Beginning course for all geology majors and geological engineers.
- 112 (12). Historical Geology. (5:4:2) W.S.** Staff
 Continuation of Geology 111, constituting a study of the history of the earth and its life forms. Representative fossils will be studied in the laboratory.
- 113 (13). Introductory Field Geology. (5:3:6) A.S.** Hintze, Rigby
 Continuation of Geology 112, involving principles of stratigraphy, introduction to paleontology, and applied physical and historical geology.
- 251 (117). Introductory Mineralogy. (3:2:2) A.** Bullock
 Introductory study of natural occurrence, chemical composition, uses, and important physical properties of minerals.
- 252 (118). Economic Mineralogy. (3:2:4) W. Prerequisite: Geology 251.** Bullock
 Comprehensive study of mineral identification by means of chemical tests, physical properties, and blowpipe analyses, with emphasis on economic ore minerals.
- 253 (119). Rocks. (3:2:2) S.** Phillips
 Megascopic study and classification of important igneous, sedimentary, and metamorphic rocks.

Upper Division Courses

- 305 (115). Geologic Illustration.** (3:2:2) W. Prerequisites: Geology 311 and Mathematics 112. Rigby
Office practice in planning and preparation of geologic maps, structure sections, and other geologic illustrations for professional reports.
- 311 (128). Structural Geology.** (5:5:0) A. Prerequisites: Geology 253 and Mathematics 112. Bissell
Study of structural features of the earth's crust and forces which have produced these structures.
- 312 (129). Map and Photo Interpretation.** (4:2:4) W. Prerequisite: Geology 311. Hintze
Study of use and interpretation of maps and aerial photographs.
- 313 (130). Geological Field Methods.** (3:2:2) S. Prerequisite: Geology 312. Bissell
Practical training in methods of geological field work and the use of field instruments.
- 410 (160). Summer Field Camp.** (6:0:40) (Summer only. See Summer Catalog). Prerequisite: Geology 313. Staff
A six-week Summer Field Camp in geological mapping. Emphasis is placed on quantitative solution of problems in engineering, petroleum, and mining geology. A 1-hour seminar is required during Spring Quarter prior to field camp. Required of all geology and geological engineering students.
- 450 (140). Petrographic Mineralogy.** (4:3:2) S. Prerequisite: Geology 252. Phillips
Introduction to optical identification of minerals from thin-sections and mineral fragments.
- 460 (180). Principles of Economic Geology.** (4:4:0) S. Prerequisite: Geology 311. Hintze
Study of origin, mode of occurrence, classification, and use of more important metallic ores and non-metallic mineral products. Field trips conducted to local mining camps.
- 470 (172). Principles of Sedimentology.** (4:3:2) W. Prerequisite: Geology 253. Bushman
Analytical study of sediments, their origin, constitution, and relationships.
- 475 (New). Principles of Stratigraphy.** (3:3:0) W. Prerequisite: Geology 253. Bissell
Study of principles of stratigraphic correlation, classification and identification.
- 480 (171). Introduction to Paleontology** (4:3:2) A. Prerequisite: Geology 113. Rigby
Systematic study of fossil remains of the animal kingdom, and introductory study of structure, distribution and development of animals in past ages.

Advanced Undergraduate or Graduate Courses

- 501 (112). Rocks and Minerals.** (3:3:0) S. Brimhall
Introductory study of fundamentals of rock and mineral classification and identification. Designed to acquaint the student with the earth's common raw materials, their occurrences, and uses. For students other than geology majors.
- 502 (New). Geology for Teachers** (3:3:0) W. Bushman
A course designed to acquaint the teacher with methods and proced-

ures for teaching geology and with sources of information, projects, and illustrative materials useful in the classroom.

- 503 (210). *Geology of Utah*. (3:3:0) A. Hintze
- 505 (New). *Geological Literature and Scientific Report Writing*. (2:2:0) W. Brimhall
- 506 (New). *Laboratory Techniques*. (1:0:2) A. Rigby
- 507 (203). *Founders and Concepts in Geology*. (4:4:0) A. Bushman
- 511 (106). *Geomorphology*. (4:3:2) A. Bushman
- 512 (231). *Geology of the United States*. (5:5:0) W. Hansen
- 520 (277). *Petroleum Geology*. (5:5:0) A. Prerequisite: Geology 311. Hansen
- 525 (216). *Well-Logging Methods and Log Interpretation*. (4:2:4) S. Pre-requisites: Geology 313 and Physics 113 or 213. Staff
- 530 (219). *Engineering Geology*. (4:4:0) A. Staff
- 535 (285). *Ground Water*. (5:5:0) S. Hansen
- 540 (150). *Introduction to Geophysics*. (3:3:0) A. Prerequisites: Geology 311, Physics 113 or 213. Brimhall
- 563 (282). *Mining Geology*. (3:3:0) S. Prerequisite: Geology 460. Brimhall
- 575 (204). *Pre-Cambrian and Paleozoic Stratigraphy*. (4:4:0) W. Hintze
- 576 (205). *Mesozoic and Cenozoic Stratigraphy*. (4:4:0) S. Bushman
- 591, 592, 593 (291, 292, 293). *Seminar*. (1:1:0 ea.) A.W.S. Staff

Graduate Courses

- 610 (230). *Structural Geology*. (4:4:0) A. Hintze
- 615 (New). *Photogeology*. (4:2:4) S. Hintze
- 617 (260, 261, 262). *Conducted Field Trips*. (5:3:4) S. Bissell
- 621 (279). *Oil Field Development*. (3:3:0) W. Prerequisite: Geology 313. Staff
- 622 (280). *Oil Field Production*. (3:3:0) S. Prerequisite: Geology 313. Staff
- 640 (214). *Seismology and Seismic Exploration*. (4:3:2) W. Prerequisites: Geology 540 and Mathematics 231. Staff
- 641 (215). *Geophysical Exploration (Other than Seismic)*. (3:2:2) S. Pre-requisites: Geology 540 and Mathematics 231. Staff
- 645 (217). *Geochemistry*. (3:2:2) A. Prerequisite: Geology 252. Brimhall
- 646 (218). *Geochemical Techniques and Mineral Prospecting*. (3:2:2) W. Pre-requisite: Geology 645. Brimhall
- 651 (250). *Optical Mineralogy*. (5:3:4) A. Prerequisite: Geology 252. Phillips
- 652 (251). *Microscopic Petrography*. (4:2:4) W. Prerequisite: Geology 450 or 651. Phillips
- 653 (New). *Determinative Mineralogy*. (4:2:4) S. Prerequisite: Geology 652. Phillips
- 655 (New). *Igneous Geology*. (4:3:2) W. Bullock
- 656 (New). *Metamorphic Geology*. (4:3:2) S. Bullock

- 661 (281). **Metalliferous Deposits.** (3:3:0) A. Prerequisite: Geology 460. Phillips
- 662 (283). **Non-Metalliferous Deposits.** (3:3:0) W. Prerequisite: Geology 460. Phillips
- 665 (New). **Minerography.** (3:2:2) W. Phillips
- 670 (273). **Sedimentology.** (3:2:2) A. Prerequisite: Geology 470. Bissell
- 671 (274). **Sedimentary Petrology.** (3:3:0) W. Prerequisite: Geology 470. Bissell
- 672 (275). **Sedimentary Petrography.** (2:1:2) W. Bissell
- 673 (276). **Sedimentary Tectonics.** (4:4:0) S. Bissell
- 678 (278). **Subsurface Stratigraphy.** (4:3:2) S. Prerequisites: Geology 311 and 470. Bushman
- 680 (269). **Micropaleontology.** (3:2:2) A. Prerequisite: Geology 480. Rigby
- 682 (270). **Vertebrate Paleontology.** (4:3:2) W. Prerequisite: Geology 480. Hansen
- 683 (272). **Biostratigraphy.** (4:3:2) W. Prerequisite: Geology 480. Rigby
- 684 (271). **Invertebrate Paleontology.** (5:3:4) S. Prerequisite: Geology 480. Rigby
- 685 (New). **Paleoecology.** (4:3:2) S. Rigby
- 696 (296). **Readings and Conference in Geology.** (1-6:1-6:0) A.W.S. Staff
- 698 (201, 202). **Research.** (2-6:2-6:0) A.W.S. Staff
- 699 (300). **Thesis Writing for Master's Degree.** (1-6:1-6:0) A.W.S. Staff
- 799 (New). **Dissertation Writing for Doctor of Philosophy Degree.** A.W.S. Staff

German

(See courses in Languages.)

Graphics

(See courses in Civil Engineering and in Industrial Arts and Drawing.)

Greek

(See courses in Languages and in Religion.)

Health Education

Professors: C. J. Hart, Hartvigsen, E. R. Kimball.

Assistant Professors: Geddes (chairman, 217 SFH), Robison, Watters.

Instructors: C. R. Kimball, Leake.

Each student is required to complete successfully Health 130 sometime during his freshman year. Transfer students must have the equivalent or take the course before graduation. Exceptions: (1) Students enrolled in the School of Nursing who complete Nursing 202 and 212 are not required to take Health 130. (2) Veterans are allowed credit for Health 130.

All students who are working toward teaching certification must take either Health 361 or Health 362.

Health Education Major. Students desiring to major in Health Education will take the following courses: 121, 310, 325, 381, 451, 521, 530, 552, and 15 hours chosen from the following elective courses in consultation with an adviser in the Department of Health Education: Health 332, 333, 511, 560; Bacteriology 121, 311; Food and Nutrition 115; Chemistry 101; H.D.F.R. 261, 360, 466; Sociology 426, 449; E.R.S. 520; Psychology 340; Zoology 164, 365.

Health Education Minor. Students may minor in Health Education by completing the following courses: 15 hours are to be selected from those courses required in the above major list and 9 hours selected from the above elective list in consultation with an adviser in the Department of Health Education.

Lower Division Courses

- 110 (P. E. 170). **Driver Education Laboratory.** (1:1:2) S. Leake
Driver education for beginning drivers. Used as a laboratory in conjunction with Health Education 310. No driving experience required.
- 121 (195). **First Aid.** (2:3:0) A.S. C. R. Kimball, Watters
Principles and practices in first aid treatment of injuries. Those successfully completing course will be given American Red Cross First Aid Certificate.
- 130 (1). **Personal Hygiene.** (2:2:0) A.W.S. Leake, Staff
Required of all freshmen students. May be taken any quarter during freshman year. Designed to present in a popular manner problems concerning personal health and proper habits of hygiene.

Upper Division Courses

- 310 (P.E. 172). **Driver Education and Training for High School Teachers.** (2:2:1) S. Leake
Designed to qualify high school teachers and instructors in driver education and behind-the-wheel training.
- 325 (157). **Materials and Methods in Safety Education.** (3:3:0) A.W.S. Watters
Emphasizes school safety, safety in the home, bicycle and traffic safety, and other areas of safety of concern to the educator.
- 332 (110). **Studies in Alcohol Education.** (2:2:0) A. Leake
Nature and effects of alcohol on human organism. Consideration given to effects of alcohol on developing cell, body resistance, longevity, morbidity, mentality, and conduct.
- 333 (New). **Fundamentals of Human Metabolism.** (3:3:0) A.S. Geddes
A study of the metabolic processes in the human organism responsible for irritability, conductivity, contractility, and recovery from fatigue.

- 361 (158). Health Education for Elementary Teachers.** (3:3:0) A.W.S. Robison, Leake
Fundamental principles of health and their application to elementary school and home situations. Designed for those preparing to teach in elementary schools.
- 362 (158). Health Education for Secondary Teachers.** (3:3:0) A.W.S. Geddes, Watters
Fundamental principles of health and their application to secondary school and home situations. Designed for those preparing to teach in secondary schools.
- 381 (New). Program Planning in Secondary School Health Education.** (3:3:0) A.W.S. Staff
Emphasis on the role of the health specialist in integrated and concentrated programs; a study of functions, program planning and resource materials related to school health education.
- 451 (131). Health Observation in Schools.** (2:2:0) W. Robison
Teaching ways of observing normal and abnormal body functions. Aim is to equip the teacher with skills in observation of school children and to recognize deviation from the normal.

Advanced Undergraduate or Graduate Courses

- 501 (226). Health Education Workshop.** (1-3:0:11-33) A.W.S. Geddes
Intended primarily for extension credit and/or Summer School. Involves a presentation of health education problems followed by discussions—conducted on a workshop basis.
- 511 (New). Investigations of Human Metabolic Processes.** (5:3:4) A. Staff
Methods and techniques in the investigation of human metabolic processes.
- 521 (224). Evaluation and Selection of School Health Material.** (3:3:0) A. Geddes
- 530 (New). First Aid Instructor.** (3:3:0) S. Watters
A course designed to qualify instructors in Red Cross First Aid, that they may conduct classes to qualify individuals for standard and advanced Red Cross cards. (Prerequisite: Advanced First Aid Card)
- 552 (132). School Health Services.** (3:3:0) A.S. Geddes
Considers desirable school health services and functions and relationships to public education and education law. Coordinates school health services with community programs.
- 560 (240). Stimulants and Depressants.** (2:2:0) W. Staff
Modification of normal physiological processes by stimulant and depressant drugs and materials.

EDUCATION COURSES

- 377 (120). Basic Classroom Procedures.** (4:4:3) W.S. Staff
For course description and fees see Education: Instruction 377.
- 478 (138). Unit Planning and Teaching.** (4:3:5) A.W.S. Staff
For course description and fees see Education: Instruction 478.
- 479 (139). Secondary Student Teaching.** (7:1:20) A.W.S. Staff
For course description and fees see Education: Instruction 479.

Graduate Courses

- | | | |
|-----|---|-------|
| 692 | (292). Research Methods in Health Education. (5:5:0) A. | Staff |
| 693 | (293). Research in Health Sciences. (2-8:1-5:5-25) A.W.S.
Independent and/or directed research in problems associated with the health sciences. This course gives credit to those graduate students involved in directed or independent research from grant-in-aid, fellowship, or contract grant support. | Staff |
| 694 | (294). Seminar in Readings. (2:2:0) A.W.S. | Staff |
| 696 | (296). Seminar in Problems. (1:1:0) A. | Staff |
| 699 | (300). Thesis for Master's Degree. (2-6:2-5:0) A.W.S. | Staff |
| 700 | (301). Field Project. (2-6:2-5:0) A.W.S. | Staff |

These courses also count in Health Education:

- Bacteriology 121. Bacteriology. (4:3:2)
 Bacteriology 311. Sanitation and Public Health. (3:3:0)
 Chemistry 101. Introductory Inorganic Chemistry. (5:5:4)
 E.R.S. 520. Group Guidance Techniques for Teachers. (3:3:0)
 Food and Nutrition 115. Essentials of Nutrition. (3:3:0)
 H.D.F.R. 261. The Latter-day Saint Family. (2:2:0)
 H.D.F.R. 360. Achieving Success in Marriage. (3:3:0)
 H.D.F.R. 466. Teaching Marriage and Family Relationships in the High School. (3:3:0)
 Psychology 340. Mental Hygiene. (3:3:0)
 Sociology 426. The Sociology of Urban Life. (5:5:0)
 Sociology 449. Community Organization, Action and Planning. (3:3:0)
 Zoology 164. Human Anatomy and Physiology. (5:3:4)
 Zoology 365. General Physiology. (5:3:4)

History

Professors: E. E. Campbell (chairman, 335 McK), L. R. Hafen, Poll*, R. B. Swensen.

Assistant Professors: Fielding, Hunt.

Instructors: Addy, Hyer, D. Jensen, Sheffield.

Requirements for a Major

A history major requires the completion of 45 hours of work in this field. These courses are required: History 110, 111, 120, and 121, normally taken in the freshman and sophomore years; History 388 and Library Science 370, junior year; History 490, senior year. Majors who seek certification in secondary education are also required to take History 366. The remaining elective hours should be selected in consultation with the departmental adviser.

A comprehensive examination is given to all majors in the final quarter of the senior year.

A student deciding to major in history should immediately consult the chairman of the department, who will assist in the selection of the minor field.

For the requirements for a teaching major in history and for the composite major in social sciences, which includes history, see College of Education.

Suggestions for a Minor

A history minor requires 20 hours of course work not including History 170 or 180. At least 10 hours should be chosen from History 110, 111, 120 and 121.

For the requirements for a teaching minor in history, see College of Education.

American History and Government Requirement

Satisfactory completion of course work in American history and government is required for all candidates for a bachelor's degree from any of the colleges of the University. History 170, History 180, or any of the following combinations of courses satisfies this requirement:

History 120 and 121.

History 120 and Political Science 110.

History 121 and Political Science 110.

Political Science 110 and Economics 274.

No student should enroll in History 170 or 180 until he has taken the classification test which is administered in connection with the testing program for incoming students and at other announced times.

Students majoring or minoring in history should not take History 170 or 180.

Students in the departments of Economics, Finance and Banking, Journalism, Political Science, or Instruction (social sciences) should elect the combinations appropriate to their fields.

Transfer students desiring to offer work from other institutions to satisfy this requirement should consult the chairman of the History Department for clearance.

History 170 and 180 are credited toward the fulfillment of the social science group requirement. Other courses taken to satisfy the American history and

government requirement also are credited toward group requirements, the history courses applying to the humanities group and the political science and economics in the social science group.

Lower Division Courses

- 110 (10). World Civilization. I. (5:5:0) A.W.S. (G-HA)** Staff
 Beginnings of major world civilizations and their development to approximately 1500 A.D., with emphasis on Europe.
- 111 (11). World Civilization. II. (5:5:0) A.W.S. (G-HA)** Staff
 Development of major world civilizations since 1500, with emphasis on Europe.
- 120 (20). The United States to 1865. (5:5:0) A.W.S. (G-HA)** Staff
 Discovery and colonization, the American Revolution, establishment of the Constitution, foreign affairs, westward expansion, sectionalism and the Civil War.
- 121 (21). The United States since 1865. (5:5:0) A.W.S. (G-HA)** Staff
 Civil War and Reconstruction, industrialization and urbanization, American imperialism, progressivism, World Wars, New Deal and current problems.
- 170 (70). The American Heritage. (5:5:0) A.W.S. (G-SS)** Staff
 Growth of the United States under the Constitution, with emphasis on political ideas and institutions and the adaptation of the governmental system to America's role as an industrial and world power.
- 180 (80). The American Heritage. (5:5:0) A.W.S. (G-SS)** Staff
 Selected sections of the basic course in American history and government (see History 170). Problems emphasis. Enrollment determined by classification test. No student who has had History 170 should enroll in History 180.

Upper Division Courses

- 300 (100). Early Oriental History. (3:3:0) W. (G-HA; G-R)** Nibley
 Ancient Egypt, Babylonia, Assyria, Arabia, Persia and Palestine.
- 304 (104, 105). Greek History and Civilization. (5:5:0) (1959-60 and alternate years.) (G-HA)** Swensen
- 307 (107, 108). Roman History and Civilization. (5:5:0) W. (1958-59 and alternate years.) (G-HA)** Swensen
- 312 (112). Renaissance and Reformation. (3:3:0) A.W.S. (G-HA; G-R)** Staff
- 316 (116). Western Civilization I. (3:3:0)** Staff
 Limited to participants in the B.Y.U. Travel-Study Program.
- 317 (117). Western Civilization II. (3:3:0)** Staff
 Limited to participants in the B.Y.U. Travel-Study Program.
- 323 (123). Europe in the Twentieth Century. (3:3:0) (1959-60 and alternate years.) (G-HA)** D. Jensen
- 330 (130, 131). Russia. (5:5:0) W. (G-HA)** Mabey
 Emphasis on the late empire and the Soviet Union.
- 332 (New). France since 1660. (3:3:0) (1959-60 and alternate years.) (G-HA)** D. Jensen
- 333 (New). Modern Germany. (3:3:0) S. (1958-59 and alternate years.) (G-HA)** D. Jensen
- 334 (New). Spain. (3:3:0) S. (1958-59 and alternate years.) (G-HA)** Addy

- 335 (140, 141). England. (5:5:0) (1959-60 and alternate years.) (G-HA) D. Jensen
- 340 (101). Asia. (5:5:0) A. (G-HA) Hyer
Emphasis on China, Japan and India.
- 345 (156, 157). China. (5:5:0) S. (G-HA) Hyer
- 346 (New). Japan. (3:3:0) W. (1958-59 and alternate years.) (G-HA) Hyer
- 347 (New). India. (3:3:0) (1959-60 and alternate years.) (G-HA) Hyer
- 350 (50). Latin America. (5:5:0) A. (G-HA) Addy
- 353 (153). Mexico. (3:3:0) (1959-60 and alternate years.) Addy
- 360 (160). The American Frontier. (3:3:0) A. (G-HA) Hafen
Highlights and significance of the westward movement in American history.
- 364 (151). The Indian in American History. (3:3:0) (1959-60 and alternate years.) Hafen
- 365 (New). California. (3:3:0) S. Campbell
- 366 (166). Utah. (3:3:0) A.W.S. (G-HA; G-R) Staff
Emphasis on the Utah territorial period and the Mormon contribution.
- 373 (173). American Intellectual and Cultural Growth. (3:3:0) W. (G-HA) Fielding
- 384 (184). American Foreign Relations. (5:5:0) A. Hunt
- 388 (188). Historiography. (3:3:0) A.S. Swensen
Fundamental problems and types of historical analysis and interpretation, philosophies of history, and work of outstanding historians. Required of history majors and recommended for the junior year.
- 490 (190). Senior Seminar. (3:3:0) A.W.S. Staff
Required of all history majors in the senior year.
- 498 (198). Special Readings in History. (Arr.) A.W.S. Staff

Advanced Undergraduate or Graduate Courses

In the Department of History, courses in the 500 series provide systematic coverage of rather broad areas of subject matter through text and library readings, lectures, reports and class discussions. Students who have not completed the relevant courses from among History 110, 111, 120 and 121 should obtain permission of the instructor before enrolling in any of these courses.

- 503 (103). Literary History of the Greeks. (3:3:0) A. Nibley
- 509 (109). Literary History of the Roman Empire. (3:3:0) S. Nibley
- 511 (111). Medieval Germany and the Papacy. (3:3:0) (1959-60 and alternate years.) Swensen
- 512 (212). Medieval Thought and Culture. (3:3:0) A. (1958-59 and alternate years.) Swensen
- 522 (New). Nineteenth Century Europe. (3:3:0) A. (1958-59 and alternate years.) Addy
- 525 (New). European Diplomatic History since 1815. (3:3:0) W. (1958-59 and alternate years.) D. Jensen
- 528 (New). Modern European Thought and Culture. (3:3:0) S. 1958-59 and alternate years.) D. Jensen

- 548 (New). Culture of Asia. (3:3:0) (1959-60 and alternate years.) Hyer
- 562 (162). American Westward Movement to 1825. (5:5:0) W. Hafen
- 563 (163). American Westward Movement after 1825. (5:5:0) S. Hafen
- 572 (172). American Revolution and the Confederation. (3:3:0) W. Fielding
- 579 (179). Contemporary United States History. (3:3:0) Prerequisite: History 121 or equivalent. (1959-60 and alternate years.) Poll
- 589 (191). Historical Classics. (3:3:0) W. (1958-59 and alternate years.) Fielding

Graduate Courses

In the Department of History, courses in the 600 series, excepting seminars, develop selected problems within the general areas of the course titles through extensive library reading, reports and class discussions. Seminars require each participant to produce a substantial research paper. Seniors who have completed all of the specifically required courses for the undergraduate major may enroll in these courses with the permission of the instructor.

- 606 (206). Greek Thought. (3:3:0) S. (1958-59 and alternate years.) Swensen
- 618 (New). Renaissance and Reformation. (3:3:0) (1959-60 and alternate years.) D. Jensen
- 621 (221). Modern Europe. (3:3:0) (1959-60 and alternate years.) Staff
- 640 (New). The Far East. (3:3:0) A. (1958-59 and alternate years.) Hyer
- 650 (New). Latin America. (3:3:0) (1959-60 and alternate years.) Addy
- 656 (256). Southwestern United States. (3:3:0) S. (1958-59 and alternate years.) Hafen
- 663 (263). Historical Geography of the United States. (3:3:0) (1959-60 and alternate years.) Duke
- 670 (270). Colonial America. (3:3:0) W. (1958-59 and alternate years.) Campbell
- 675 (275). The New Nation. (3:3:0) (1959-60 and alternate years.) Hunt
- 676 (276). Jacksonian America. (3:3:0) A. (1958-59 and alternate years.) Fielding
- 677 (277). Civil War and Reconstruction. (3:3:0) (1960-61 and alternate years.) Poll
- 678 (278). American Industrial Revolution. (3:3:0) (1959-60 and alternate years.) Poll
- 686 (286). Constitutional History of the United States. (3:3:0) W. C. Jensen
690. Teaching History in College and University. (3:3:0) (1959-60 and alternate years.) Staff
- 694 (294). Seminar in European History. (3:3:0) W. Staff
- 695 (295). Seminar in Western American History. (3:3:0) A. Hafen
- 696 (296). Seminar in United States History. (3:3:0) S. Staff
- 697 (297). Seminar in Utah History. (3:3:0) S. Staff
- 698 (298). Special Readings in History. (1-2:1-2:0) A.W.S. Staff
- 699 (299). Thesis for Master's Degree. A.W.S. Staff
799. Dissertation for Doctor's Degree. A.W.S. Staff

These courses also count in History:

Economics 274. Economic History of the United States. (5:5:0)

Library Science 370. Historical Bibliography and Methods of Research. (3:3:0).

Political Science 506. History of American Political Thought. (3:3:0).

Political Science 522. Contemporary Problems. (3:3:0).

Political Science 557. Government and History of Canada. (3:3:0).

Political Science 595. American Constitutional Development. (3:3:0)

Home Arts

(See courses in Housing and Design.)

Home Economics

(See College of Family Living.)

Homemaking Education

Assistant Professor: Poulson.

Instructors: Jewell (chairman), Applonie.

Special Instructors: F. Beck, H. Wakefield.

The objective of the Department of Homemaking Education is two-fold: to help students become professionally minded and to provide instruction that will lead to certification for teaching. For certification, a bachelor's degree in arts or science from an accredited college and a teaching certificate from the State Department of Public Instruction are required.

Prospective teachers should know that the comprehensive objectives of teaching homemaking are to help girls and boys in the secondary schools meet their needs as individuals, as family members and as community members. The teacher's professional qualifications include enthusiasm for teaching, knowledge and use of social skills, a well-groomed personal appearance, and a wholesome acceptance of professional responsibilities.

Majors in the Department of Homemaking Education will need to complete the following program to receive a bachelor's degree with a major in the department and a certificate from the State Department of Public Instruction to teach in secondary schools:

1. A minimum of 60 credit hours selected from among the subject matter departments within the College of Family Living. The Department suggests 64 to 70 hours, to include the courses listed under (A) and (B).
 - A. The following courses which total 58-59 credit hours are required: Clothing and Textiles 110, 115, 225, 260, or 370, 335, 475; Food and Nutrition 110, 255, 256, 264, 340; Economics and Management of the Home 225, 330, 470; Housing and Design 360, 375; Human Development and Family Relationships 210, 211, 322, 361; and Nursing 288.
 - B. Within the 64 to 70 credit hours, 5 or more will be selected from the following courses: Clothing and Textiles 355; Food and Nutrition 170, 330, 345, 560; Housing and Design 120, 345; Human Development and Family Relationships 160, 360; Economics and Management of the Home 265, 350.
2. To fulfill University requirements and those of the State Department of Public Instruction the following courses should be elected:

	Hours		Hours
Biological science	10	Physical Science	12
Bacteriology 121		Chemistry 101	
Health 130		Chemistry 102	
Zoology 105 or 164		Physics 104	
Human. and aesthetics	15	Social science	15
Art 110		Economics 101	
Other art (3), literature (6),		or Ag. Econ. 101	
music, philosophy, speech (4)		History 170 or 180	
		Psychology 111	

3. Professional education courses, 33 credit hours: (A) 17 credit hours in homemaking education, (B) 16 credit hours in the College of Education.
 - A. Homemaking Education 377, 475, 478, 479.
 - B. Health Education 361; Educational Research and Services 304; Education: Instruction 450; Educational Administration 310; Educational Philosophy and Programs 415.

Suggested Elective:

Audio-Visual Education 305; Journalism 101; Speech 102 or 103.

The program below is designed so that its successful completion will lead to vocational certification and preparation to teach in all areas of homemaking in the high schools in Utah. Students should plan their program with a member of the Homemaking Education Department before registering.

Suggested Program for Majors in Homemaking Education

Freshman Year

	A	W	S
Religion	2	2	2
English (composition)	3	3	3
Physical Education	1	1	1
Health 130			2
Chemistry 101, 102	5	4	
Physics 104			3
Art 110 (A.W. or S.)	2		
Clothing and Textiles 110, 115 (A. W. or S.)		3	2
Food and Nutrition 110 (A. W. or S.)			4
Family Living 101	1		
Bacteriology 121		4	
Elective (A. or S.)	3		
Total Hours	17	17	17

Sophomore Year

	A	W	S
Religion	2	2	2
Psychology 111 or 370	5		
Economics 101 or Ag. Econ. 101		5	
Clothing and Textiles 225, 260 or 370	3	2-3	
Economics and Management of the Home 225			3
Food and Nutrition 255, 256, 264		4	4
Zoology 105 or 164	5		
Human Development and Family Relationships 210, 211		4	
Human Development and Family Relationships 361 (A. or W.)			3
Nursing 288			2
Electives	2	2	
Total Hours	17	17	17

Junior Year

	A	W	S
Religion	2	2	2
English (literature)		3	
Clothing and Textiles 335 ..	3		
Health Education 362		3	
Educational Research and Services 304		4	
Economics and Management of the Home 330 (W. or S.)		3	
History 170			5
Food and Nutrition 340 (A. or W.)	4		

Housing and Design 360, 375	2	3	
Human Development and Family Relationships 322 (A. W. or S.)	3		
Homemaking Education 377 (W. or S.)	4		
Homemaking Education 478		4	
Electives (W. or S.)		3	
Total Hours	16	17	17

Senior Year

Plan 1—Autumn Quarter Block

	A	W	S
Religion		2	2
Humanities			3
English (literature)			3
Electives	5		
Art	3		
Electives			4
Education: Instruction 450 ..	3		
Homemaking Education 475*	2		
Homemaking Education 479*	7		
Clothing and Textiles 475* ..	2		
Educational Philosophy 415 ..		3	
Economics and Management of the Home 470* (if not taken in third year)	4		
Educational Administration 310			3
Total Hours	15	16	15

Plan 2—Winter Quarter Block

	A	W	S
Religion	2		2
English (literature)	3		
Humanities			2
Electives			5
Art	3		
Clothing and Textiles 475	2		
Electives	4		
Ed. Phil. 415*, Ed. Administration 310		3	3
Education: Instruction 450 ..			3
Economics and Management of the Home 470* (if not taken in third year)		4	
Homemaking Education 479* ..	7		
Homemaking Education 475* ..	2		
Electives	3		
Total Hours	17	16	15

Plan 3—Spring Quarter Block

	A	W	S		
Religion	2	2		Education: Instruction 450*..	3
English (literature)		3		Economics and Management	
Humanities	2			of the Home 470* (if	
Elective	5			not taken in third year)	4
Art		3		Homemaking Education	
Clothing and Textiles 475 ..		2		479*	7
Elective	4			Homemaking Education	
Educational Phil. 415	3			475	2
Educational Administration				Electives	4
310*		3			
				Total Hours	16 16 17

*Courses which may be completed in five weeks to combine in a block with student teaching.

Opportunities for Informal Teaching Experience

Centers are available on campus where consultant instructors trained in all areas of homemaking help students with problems concerned with the mechanics and graciousness of living. The centers offer realistic laboratory situations for student teachers in homemaking education. Student teachers will become aware of the kinds of problems students have since help may be requested with such problems as grooming; etiquette; the care, selection, or construction of clothing; the daily tasks of management; the use of equipment; buying, meal planning, or meal preparation for themselves or for groups; and group entertaining. They will have a chance to observe the consultant instructors help men and women students, some with families, work out solutions to their problems. Opportunity to assist the consultant instructor will also be given.

The centers provide interested, eager audiences for demonstrations planned and carried out by students in homemaking education. These demonstrations will be given in many areas of homemaking, thus giving experience to student teachers as well as answering needs of the groups.

Wymount Village (a group of twenty units housing 200 students and their families) and Wyview Village (a group of houses facilitating 150 families) are ready-made communities offering student teachers an opportunity to learn to adapt their teaching methods to adults. This experience will prepare them for adult education programs in the communities where they may teach.

Upper Division Courses

377 (120). Basic Classroom Procedures. (4:4:3) W.S. Prerequisite: E.R.S. 304. Staff

For course description and fees see Education: Instruction 377.

381 (121). Methods of Teaching Food and Nutrition. (3:3:0) S. Alternate years. Staff

Basic principles of teaching food and nutrition in hospitals and public health situations.

382 (New). Methods of Teaching Food and Nutrition—Laboratory. (2:0:2) S. Staff

Alternate years.
Application of basic principles of education.

475 (123). Demonstration Experiences. (2:2:2) A.W. Prerequisite: Homemaking Education 478 or equivalent blocked with Homemaking Education 479. Staff

Students plan and give demonstrations in areas of food, clothing, equipment, housing and child care, with aspects of management considered in each area. Laboratory for demonstrations may be in Aurelia Spencer Rogers Hall, 9B, Homemaking Education Laboratory or B.Y. High School laboratory. Methods of demonstration adapted to the teaching of homemaking in secondary schools are stressed.

- 478 (138). Unit Planning and Teaching.** (4:3:5) A.S. Prerequisite: Homemaking Education 377. Staff
For course description and fees see Education: Instruction 478.
- 479 (139). Secondary Student Teaching.** (7:1:20) A.W.S. Prerequisite: Homemaking Education 478 and the completion of two-thirds of the courses required from among subject matter departments within the College of Family Living. Staff

Blocked with courses from among those listed as block courses. Supervised teaching is carried on in an approved homemaking department of a public secondary school for half a quarter on a full-day basis. The student teacher lives in the community in which she teaches. She bears her own expenses. Close contact is made with faculty, students and community. Participation on committees and in extra-curricular activities and responsible planning and teaching is expected. Lab. fee: \$15.00.

Graduate Courses

- 664 (New). Curricula in Homemaking.** (2-3:3:0) Su. 1958.
- 666 (223). Teaching Home Economics in Secondary School.** (3:3:0) Su. 1957.
- 668 (New). Evaluation in the Teaching of Homemaking.** (2-3:3:0) Su. 1958.
- 670 (New). Supervision of Student Teachers in Homemaking.** (2-3:3:0) Su. 1959.
- 672 (New). Adult Education in Homemaking Education.** (2-3:3:0) Su. 1960.
- 680 (New). Methods of Research in Homemaking Education.** (2-3:3:0) Su. 1960.
- 690 (New). Independent Project in Homemaking Education.** (1-4:4:0) Su. 1959.
- 694 (New). Graduate Seminar in Homemaking Education.** (1:1:0) Su. 1959.
- 698 (New). Field Project.** (Arr.) Su. 1960.
- 699 (New). Thesis for Master's Degree.** (Arr.) Su. 1960.

Home Management

(See courses in Economics and Management of the Home.)

Horticulture and Horticultural Specialties

Professors: Harrison, Snell (emeritus).

Associate Professor: Ashton.

Instructor: Reimschiessel (chairman, 265 BOT).

Students majoring in this department may emphasize either pomology (fruit production), ornamental horticulture, landscape gardening, or floriculture.

Students majoring in pomology are required to complete Horticulture 101, 353, 402, 403, 455, 456, 471, and at least 14 additional hours in horticulture and horticultural specialties. Minimum requirement is 40 hours. Botany 101, 470, and 410 and Chemistry 111 or equivalent courses are also required.

Students majoring in ornamental horticulture are required to take the following courses: Horticulture 103, 107, 315, 317, 318, 319, 324, 402, 403, 416, 430, and 459; Botany 101, 123, 410; Agronomy 451; Chemistry 111 or its equivalent; Drawing 113; and Art 110.

Students majoring in landscape gardening are required to take the following courses: Horticulture 103, 107, 315, 317, 318, 319, 324, 402, 403, 416, 430; Botany 101, 123, 550; Chemistry 111 or its equivalent; Drawing 113; and Art 110.

Students majoring in floriculture are required to take the following courses: Horticulture 103, 107, 315, 318, 402, 403, and 470; Agronomy 459; Botany 101, 123, 410; and Zoology 334.

In addition to the above requirements all students in this department are required to take Agronomy 141, 251; Agricultural Economics 123, 125, and 310; two of the following: Animal Husbandry 101, 161, 170, 207.

Lower Division Courses

- | | | |
|-----|---|---------------|
| 101 | (1). Principles of Fruit Production. (3:3:0) A.W.
Principles underlying the profitable production of tree and small fruits. Varieties, soils, sites, fertilizers, culture, pest control, harvesting, storage, and propagation. Introduction to pomology. | Ashton |
| 102 | (2). Vegetable Production. (3:3:0) S.
Principles and practices of profitable vegetable production. | Ashton |
| 103 | (3). Beautifying the Home Grounds. (3:3:0) A.W.S.
Principles of design and composition as applied to home ground development and plant culture. | Reimschiessel |
| 107 | (7). Floriculture. (3:3:0) A.S.
Herbaceous plant culture in the greenhouse and out-of-doors. | Reimschiessel |
| 112 | (12). Flower Arrangement. (3:3:0) A.S.
Principles and methods of arranging flowers and other plant materials for decorative use in the home and for exhibition. | Reimschiessel |

Upper Division Courses

- | | | |
|-----|--|--------|
| 310 | (110). Small Fruit Production. (3:3:0) W.
Principles and practices of successful and profitable production of small fruits for home and commercial plantings. Special emphasis on new varieties and disease and insect control. | Ashton |
| 312 | (112). Practical Orchard Management. (5:1:8) S.
Training, pruning, fertilizing, insect control, fruit thinning of orchard trees. | Ashton |

- 315 (115). Garden Flowers.** (3:2:2) S. Taught in odd-numbered years. Prerequisites: Botany 101, 123. Reimschiissel
Important ornamental herbaceous plants in Utah.
- 317 (117). Nursery Practice.** (2:0:4) S. Taught in even-numbered years. Staff
- 318 (118). Greenhouse Management.** (5:3:4) W. Taught in even-numbered years. Prerequisite: Horticulture 107. Staff
- 319 (119). Turf Management.** (3:2:2) A. Taught in odd-numbered years. Staff
- 324 (124). Landscape Design.** (3:0:6) W. Taught in even-numbered years. Prerequisites: Horticulture 103 and Drawing 113. Reimschiissel
Designing private and public home grounds.
- 352 (152). Systematic Pomology.** (2:2:0) A. Taught in odd-numbered years. Ashton
Emphasis on identification, description, and nomenclature of fruits and fruit trees.
- 353 (153). Harvesting and Storage of Fruits.** (2:2:0) A. Taught in even-numbered years. Ashton
Problems related to harvesting and storage of fruits and vegetables.
- 402 (102). Plant Propagation.** (3:3:0) W. Ashton
Principles and practices of propagation of horticultural plants.
- 403 (103). Plant Propagation Laboratory.** (2:0:4) W. Ashton
- 416 (116). Woody Plants.** (3:2:2) S. Taught in odd-numbered years. Reimschiissel
Important ornamental woody plants in Utah.
- 430 (130). Planting Design.** (3:0:6) W. Taught in odd-numbered years. Prerequisites: Horticulture 315, 316, and 324. Reimschiissel
Woody and herbaceous plant composition emphasized for private and public grounds.
- 455 (155). Advanced Pomology.** (5:3:4) A. Taught in odd-numbered years. Prerequisite: Horticulture 101. Ashton
Principles and practices of established deciduous orchards.
- 456 (156). Orchard Management.** (3:3:0) W. Prerequisite: Horticulture 101. Ashton
Problems related to climate, soil, water, nutrition, varieties.
- 458 (158). Weeds and Seed Analysis.** (2:0:4) A. Reimschiissel
Important weeds occurring in Utah and their control. Seeds likely to occur in commercial seed.
- 471 (171). Diseases of Cultivated Fruits.** (3:3:0) A. Taught in even-numbered years. Ashton
Bacteria, fungus, virus, and nutritional diseases of horticultural plants.
- 491, 492, 493 (191, 192, 193). Seminar.** (1:1:0 ea.) A.W.S. Ashton
Current literature will be reviewed. For seniors and graduate students majoring in horticulture or plant pathology.
- 495, 496, 497 (195, 196, 197). Special Problems in Horticulture.** (Arr.) A.W.S. Staff

These courses also count in Horticulture:

Agronomy 459. Plant Breeding. (3:3:0)

Botany 470. Diseases of Cultivated Plants. (5:3:4)

Housing and Design

Instructors: E. L. Gardner (chairman, 3256 SFLC), M. Barlow, Domgaard, L. Taylor.

The Department of Housing and Design is organized to help the student appreciate, understand, and plan for attractiveness and usefulness in home environment through study, observation, and creative experience. The primary goal is to increase ability to make the home and its surroundings worthy of their high purpose: to provide a place for the promotion of the spiritual, aesthetic, intellectual, and physical growth of the family, as well as to provide shelter. Principles of good design and the wisdom of planning within the budget are emphasized.

A minor is offered with selected courses from related departments. A major may be elected in conjunction with the Department of Economics and Management of the Home or other related departments for students interested in interior decoration or home service work for commercial companies.

For a combined major in housing and design and economics and management of the home a total of 32 credit hours in the two departments is required. For graduation from the College of Family Living these hours must be combined with enough credits in the college to total 60 hours. Included shall be clothing and textiles, 4 hours; food and nutrition, 4 hours; human development and family relationships, 6 hours.

Following is a suggested program for a combined major in housing and design and economics and management of the home.

Freshman Year

	Hours
Religion	6
English	9
Phys. Ed. and Health	5
Art 110 or 111	2-4
Chemistry 101, 102	9
or	
Geology 101 and 102 or 110	
and 102	4
Physics 104	3
Psychology 111	5
Econ. and Mgt. of Home 130	3
Family Living 101	1
Food and Nutrition 110	4
Housing and Design 135	3

Sophomore Year

	Hours
Religion	6
Art 121	4
Archaeology 150 or 221	4-9
History 110 or 111	5
Bacteriology 121	4
Economics 101	
or Ag. Econ. 101	5
Zoology 105 or 164	5
Clothing and Textiles 115 or	
260	3-6
Food and Nutrition 210 or 240 ..	3-4
Housing and Design 120	2

Hum. Dev. and Fam. Rel. 160,	
210, 211	2-4
Electives (Horticulture and Ind.	
Art)	4-6

Junior Year

	Hours
Religion	6
Art 259, 263, 406	4-6
English (literature)	3
History 180	5
Physics 177	4
Clothing and Textiles 260, 370	2-5
Econ. and Mgt. of Home 325,	
330	3-6
Housing and Design 335, 360, 375 ..	5-8
Hum. Dev. and Fam. Rel. 360,	
361	3-6
Electives (Horticulture, Ind.	
Art, Bus. Mgt.)	3-6

Senior Year

	Hours
Religion	6
English (literature)	3
Art 313, 415, 417	2-8
Clothing and Textiles 370, 430	2-5
Econ. and Mgt. of Home 330,	
350	3-6
Housing and Design 375, 380	3-8
Electives (Art, Bus. Mgt., Ind.	
Art)	15-20

Courses are planned to be of value to both men and women.

Lower Division Courses

- 120 (20). Weaving.** (2:1:3) A.W.S. Prerequisite: Art 110 or equivalent.
Domgaard, M. Barlow
Creative design as applied to woven fabrics; experience in weaving methods. A survey of hand-woven fabrics in world cultures.
- 135 (45). Household Equipment.** (3:2:2) A.W. Staff
Selection, placement, use, care, and repair of household equipment. Advantages of various types of equipment.

Upper Division Courses

- 235 (145). Household Equipment.** (3:2:2) S. Prerequisite: Physics 104. Staff
Selection, use, care and repair of household equipment. Advantages of various types of equipment. Consideration of installment buying. Kitchen planning for efficient use of equipment. Introduction to home lighting.
- 360 (160). Home Furnishings.** (2:1:3) A.W.S. Prerequisite: Clothing and Textiles 115. Art 110, 314, and Clothing and Textiles 260 recommended.
M. Barlow
Art related to the home through home furnishings; their care and construction; economics and art applied to their selection. Laboratory work includes making of draperies, slip covers, lamp shades, quilting and weaving.
- 375 (175). Housing.** (3:3:0) A.S. Housing and Design 360 recommended.
L. Taylor
Housing requirements of families as influenced by their interests, activities, and socio-economic status. Planning of room arrangement and space. Field trip.
- 380 (New). Interior Decoration.** (5:5:0) W. Prerequisites: Art 110 and Housing and Design 120 or Clothing and Textiles 260. L. Taylor
The interior of the home as a creative expression of the family, its needs and individuality. Structure, composition, and design of furniture, floor coverings, and fabrics as related to their placement, use, and care within the contemporary home.

Advanced Undergraduate or Graduate Course

- 590 (New). Special Problems.** (1-3:0:3-9) A.W.S. Prerequisite: permission of instructor and chairman of department. Staff
Independent study of a special problem in housing and design under the direction of an instructor.

Graduate Courses

- 680 (New). Interior Decoration and Furnishings.** (5:5:0) W.Su. Prerequisites: Art 110, Clothing and Textiles 160 and 370, and Housing and Design 120. Staff
- 687 (New). Problems in Room Decoration.** (3:2:2) Su. Prerequisite: Housing and Design 680. Staff

These courses also count in Housing and Design:

- Art 313. Home Planning.** (2:2:0)
Art 415, 417. Interior Design. (3:3:0 ea.)
Horticulture 103. Beautifying the Home Grounds. (3:3:0)
Horticulture 112. Flower Arrangement. (3:3:0)
Industrial Arts 101. Wood and Metal Finishing. (3:1:5)
Industrial Arts 119. Upholstery. (2:0:4)

Human Development and Family Relationships

Professors: Porter (chairman, 1239 SFLC), Cannon.

Associate Professor: F. Anderson.

Instructors: Barlow, Kunz, Jensen, Rollins, Storey, Taylor, Tyndall.

Among the purposes of the Department of Human Development and Family Relationships (H.D.F.R.) are the following:

1. To provide opportunities for increased understanding and appreciation of abundant and harmonious living within the family, including its relationship to the church and the community.
2. To help students gain increased self-understanding and appreciation of insight and skills basic to effective human relationships.
3. To provide opportunities for the study of human development and family relationships from infancy through old age which will:
 - (a) facilitate the achievement of successful marriage and parenthood
 - (b) lead to professional competency for those who are interested in vocational opportunities in this field.
4. To provide opportunities for research which will ultimately contribute to increased understanding of human development and family relationships.
5. To provide graduate training leading to a master's degree (and doctor's degree commencing Autumn Quarter, 1959) in human development and family relationships.

The B.Y.U. human development laboratories are among the most modern and up-to-date in the nation. Through the laboratories of the University and the facilities of the community, opportunities are provided for the study of human development and family relationships from infancy through old age.

Students in H.D.F.R. have the opportunity to enhance their professional training by attending one quarter or more at the Merrill-Palmer School in Detroit, Michigan, with which the College of Family Living has an affiliation.

Suggestions for a Minor

For a minor in human development and family relationships, a selection of 20 credit hours from the following courses is suggested: H.D.F.R. 160, 210, 211, 261, 322, 360, 361, 405, 412, 510, 570, 572.

Requirements for a Major

For a major in human development and family relationships, a minimum of 40 credit hours in the department is required. A maximum of 10 of the 40 hours may be chosen from a selected list of courses in other departments, with consent of the departmental adviser. For graduation from the College of Family Living these hours are to be combined with enough credits in the College to total 60 hours for women and 50 hours for men. The completion of 60 hours in the College of Family Living, in addition to meeting the minimum requirements of 40 credit hours in the department, also automatically provides a minor in family living general. Another minor may be selected if the student so desires but it is not necessary.

A maximum of 10 credit hours may be selected to apply toward a major in H.D.F.R. from the courses listed in the section "These courses also count in H.D.F.R." at the end of the H.D.F.R. departmental courses.

Credits in the College of Family Living shall include

For Women:	Hours
Clothing and Textiles	4
Economics and Management of the Home	3
Food and Nutrition	4
Housing and Design	3
For Men:	
Economics and Management of the Home	3-6
Food and Nutrition (110 or 115 and other if desired)	3-6
Housing and Design	3-6

The total for men shall include at least four courses selected from the three departments designated with a minimum of 3 credit hours in each department and a minimum total of 12 hours.

Suggested Program for Majors

Freshman Year		Hours		Hours
Religion**		6	H.D.F.R. 210**, 211**	3, 1
Freshman English**		9	Electives	10-15
(determined by placement test)			Junior Year	
Phys. Ed. and Health 130**		5	Religion**	6
Physics, Geology or Chem.*		9	English (literature)	6
Psychology 111**		5	Psychology 321	3
Art 110		2	Econ. and Mgt. of Home 225 or 330	3
Cloth. and Tex. 110 (women) or 115* (women)	2 or 3		Food and Nutrition 245 (women)	3
Food and Nutrition 115* (men) 110* (men or women)	3 or 4		H.D.F.R. 322	3
Family Living 101	1		360	3
H.D.F.R. 160	2		361	3
Sophomore Year			412	3
Religion**		6	413	1
Bacteriology 121		4	Electives (education, psychology, sociology, music, philosophy, speech)	10-15
Zoology 105 or 164		5	Senior Year	
Economics 101 or Ag. Econ. 101		5	Religion**	6
Sociology 111		5	H.D.F.R. 510	5
History 170 or 180		5	570	3
Humanities and Aesthetics*	3-8		572	3
(art, archaeology, history, speech, music)			592	3
Clothing and Textiles 335 (women)	3		Electives (education, psychology, sociology, H.D.F.R., etc.)	20-25
Housing and Design*	3		*required	
			**required year listed	

Courses in other departments that may be of interest to students in Human Development and Family Relationships are Psychology 440, 455, 540, 550; Sociology 314, 362, 402, 403, 443, 460; Speech 121, 122.

Specialized Programs

Students specializing in child development and/or nursery education must also take H.D.F.R. 321, 324, 422, 521, 575.

Students specializing in professional work with families must also take H.D.F.R. 440, 580.

Students interested in completing a major in human development and family relationships and also qualifying for an elementary teaching certificate may do so.

**For H.D.F.R. Majors Who Wish to Also Qualify
For Elementary Teaching Certificate**

The successful completion of the following program will (a) provide a major in Human Development and Family Relationships, (b) qualify a student for an elementary teaching certificate with a kindergarten efficiency statement attached, (c) satisfy the general education requirements for the university, and (d) complete the College of Family Living graduation requirements. Students will be prepared to teach nursery school, kindergarten and primary grades.

Freshman Year			
	Hours		
Religion	6	Health Ed. 361	3
English (determined by placement tests)	9	Humanities	4
Phys. Ed. and Health 130	3,2	Junior Year	
Psychology 111	5		Hours
Physics, geology or chemistry ..	9	Religion	6
Art 110	2	H.D.F.R. 321, 322, 324, 422	3,3,3,5
Cloth. and Tex.	4	English literature	2-4
Food and Nutrition 110 (men or women) 115 (men)	3 or 4	Economics and Mgt. of Home 325 or 330	3
Sophomore Year		Ed. Inst. 422, 325	5,2
	Hours	Ed. Adm. 310	3
Religion	6	E.R.S. 304	3
H.D.F.R. 210, 211, 360, 361	3,1,3,3	Food and Nut. 245	3
Bacteriology 121	4	Humanities	4
Zoology 105 or 164	5	Senior Year	
Economics 101			Hours
or Ag. Econ. 101	5	Religion	6
History 170 or 180	5	English Literature	2-4
Ed. Inst. 237 and 340	3,3	H.D.F.R. 510, 570, 572, 575	5,3,3,3
Phys. Ed. 375	2	Ed. Inst. 448, 449, 450	6,6,3
		Ed. Phil. 415	3
		Housing and Design	3

Courses in this department are of value to both men and women.

Lower Division Courses

- 105 (New). The Infant in the Family. (3:3:0) W.** Kunz
Concerned with the infant as a developing individual within the family unit. Readings and class discussions are supplemented with direct experiences with infants and their parents.
- 160 (85). Foundation for Marriage. (2:2:0) A.W.S.** F. Anderson, K. Cannon, Porter
Understanding oneself in relation to the desire for a marriage partner and a family. Consideration of dating, courtship, engagement, and religious, social and economic factors as related to marriage and its early adjustments.
- 210 (40). Child Development I. (3:3:0) A.W.S. (†G-SS;G-R) Prerequisite: Psychology 111; Sociology 111 recommended.** Kunz, Jensen, Storey, Taylor
Consideration of the growth and development of the child and his relationships with his family, peers, and teachers from infancy through adolescence. (Must be accompanied by H.D.F.R. 211.)
- 211 (41). Observation in the Human Development Laboratories. (1:0:2)** Kunz, Jensen, Storey, Taylor
To accompany H.D.F.R. 210.
- 261 (15). The Latter-day Saint Family. (2:2:0) A.W.S. (G-R)** Anderson, K. Cannon, Porter
Place of the family in L.D.S. doctrine and philosophy, together with ap-

plication of basic religious principles to marriage and family relationships. A comparison of L.D.S. and non-L.D.S. families in time and space.

Upper Division Courses

- 321 (111). Nursery School Methods.** (3:3:0) S. Prerequisite: H.D.F.R. 210.
Storey
Curriculum planning for the nursery school, including home-school relations. Observation of teaching in the nursery school.
- 322 (101). Experience with Children.** (3:2:3) A.W.S. Prerequisite: H.D.F.R. 210.
F. Barlow
An opportunity to more fully understand children as well as oneself while working with children in the human development laboratories.
- 324 (104). Creative Play in Childhood.** (3:3:0) W. Prerequisite: H.D.F.R. 210.
Storey
Use of creative play materials in enriching a child's life. Meaning of play and its value in meeting needs of the growing child.
- 360 (160). Achieving Success in Marriage.** (3:3:0) A.W.S. (G-SS;G-R)
Bradford, Canning, K. Cannon, Dyer, Porter, F. Anderson
Consideration of factors that contribute to successful marriage. Maturity, compatibility and cooperation as basic concepts in marital adjustment. Maximization of family development through healthy parent-child relationships and effective management of family resources. Unique tasks faced by the family in maintaining stability in a dynamic twentieth-century world.
- 361 (161). Family Relationships.** (3:3:0) A.W.S. (†G-SS;G-R) Prerequisites: 9 hours in H.D.F.R., Psychology, and Sociology.
K. Cannon, Porter
Inter-personal relationships in the family; their significance in developing values, goals, attitudes and patterns of behavior through the various stages of the family life cycle.
- 405 (New). Development in Infancy.** (3:3:0) A. Kunz
Developmental characteristics during the first eighteen months with implications for guidance and care.
- 412 (102). Principles of Child Guidance.** (3:3:0) S. (†G-SS;G-R) Prerequisite: H.D.F.R. 210 (Must be accompanied by H.D.F.R. 413).
Porter
Applications of knowledge and understanding of child behavior and psychodynamics of family inter-action to guidance of children. Behavior and guidance principles are studied directly in the human development laboratories. Helpful to parents and prospective parents.
- 413 (103). Observation in the Human Development Laboratories.** (1:0:2) S.
Porter
To accompany H.D.F.R. 412.
- 422 (112). Supervised Teaching in the Nursery School.** (5:1:12) A.W.S. Prerequisite: H.D.F.R. 321, 322 and consent of instructor.
Kunz
Experience in teaching and supervising a group of nursery school children. Students arrange with instructor to spend twelve hours a week in the nursery school laboratories.
- 440 (120). Family Life in the Middle and Later Years.** (3:3:0) W. (†G-SS; G-R) Prerequisite: 6 hours in H.D.F.R., psychology and sociology.
K. Cannon
Adjustments in middle and later years revolving around physical, emotional, and social changes. Emphasis is placed upon needs that arise from changes in family relationships, living arrangements, and employment. Discussions of public and private provisions designed to meet needs of older people.

- 466 (New). **Teaching Marriage and Family Relationships in the High School.** (3:3:0) A. Prerequisite: 9 hours in H.D.F.R. Staff

Consideration of problems of high school boys and girls in areas of relationships with parents, siblings, peers, dating, behavior standards, selecting a marriage partner, courtship, love, engagement, adjustment in marriage. Materials which will be useful to the high school teacher and student in thinking through such problems.

- 492 (192). **Seminar.** (2:2:0) W. Prerequisite: 15 hours in H.D.F.R. Staff

Analysis and evaluation of selected research reports in human development and family relationships. Special emphasis upon problems involved in designing and executing research.

Advanced Undergraduate or Graduate Courses

- 510 (110). **Child Development II.** (5:3:4) W. Prerequisites: H.D.F.R. 210, 211. Psychology 321 recommended. Kunz, Porter

Intensive study of application of principles of child development and behavior as they relate to home situations, nursery schools, daycare centers, and other children's programs. Observation and actual experiences with children from infancy through adolescence.

- 520 (100). **History and Philosophy of Nursery School Education.** (3:3:0) A. Kunz

History and philosophy of the child development movement. Consideration of present-day agencies and programs operating to further the welfare of children.

- 521 (113, 214). **Nursery School Planning.** (3:3:0) S. Prerequisite: H.D.F.R. 321. Kunz

Essential procedures in nursery school organization and administration including housing, equipment, food service, health protection and supervision; analysis of responsibilities of a head teacher. Field trips to selected children's centers.

- 570 (170). **Community Factors in the Development of Children and Families.** (3:3:0) S. Prerequisite: H.D.F.R. 210, 361 and Sociology 111. Porter

Study of community factors in development of children and families. Acquaintance with resources of the community as they relate to the welfare of the child and his family. Field trips to acquaint students with community agencies.

- 572 (162). **The Professional Person and Families.** (3:3:0) W. Prerequisites: 9 hours in H.D.F.R., psychology and sociology. Porter

Study of ways in which families are important to the professional person who works either directly or indirectly with families; methods of obtaining information about families; kinds of information most valuable to the professional person; effective ways of using information about families.

- 575 (165, 265). **Parent Education.** (3:3:0) W. Prerequisite: consent of instructor. Kunz, Porter

Training for parent education. Basic principles in organization of parent study programs. Formulation and presentation of programs for parents.

- 580 (175). **Introduction to Marriage and Family Counseling.** (3:3:0) W. Prerequisite: consent of instructor. F. Anderson

Theories and techniques used in marriage and family counseling. Consideration of individual and group counseling as it pertains to the family.

- 590 (190). **Readings in Human Development and Family Relationships.** (1-3:1-3:0) A.W.S. Prerequisite: consent of instructor. K. Cannon, Kunz, Porter

Discussions and reports of current readings in this field. Open to students who have completed fifteen hours of human development and family relationships.

- 592 (192). Seminar. (2:2:0) S. Staff
 Analysis and evaluation of selected research reports in human development and family relationships. Special emphasis upon problems involved in designing and executing research.
- 595 (195). Special Topics in Human Development and Family Relationships. (1-3:1-3:0) A.W.S. F. Anderson, K. Cannon, Kunz, Porter
 Individual study for qualified students majoring in human development and family relationships upon consultation with the instructor and the chairman of the department.
- 596 (296). Research Problems and Methods in Human Development and Family Relationships. (3:3:0) A. K. Cannon
 Analysis of research methods used in human development and family relationships. Students have active experience in formulating a research project.

Graduate Courses

- 610 (210). Advanced Child Development. (3:3:0) W. Prerequisite: H.D.F.R. 510. Staff
- 611 (New). Current Research in Child Development. (3:3:0) A. Porter
- 661 (260). Dynamics of Family Interaction. (3:3:0) S. Prerequisites: H.D.F.R. 360 and 361. Porter
- 663 (263). Critical Problems in Family Life. (3:3:0) W. Prerequisite: H.D.F.R. 361. K. Cannon
- 664 (New). Current Research in Family Relationships. (3:3:0) W. Porter
- 666 (New). Problems of Teaching Marriage and Family Relationships in High School. (3:3:0) Su. Prerequisite: A minimum of 2 years of teaching experience. Staff
- 667 (267). Problems of Teaching Marriage and Family Relationships in College. (3:3:0) Su. Staff
- 669 (296). Seminar. (2:2:0) W. Staff
- 697 (299). Independent Research. (1-3:1-3:0) A.W.S. F. Anderson, K. Cannon, Porter
- 699 (300). Thesis for Master's Degree. (1-6:1-6:0) A.W.S. Staff
- 780 (275). Marriage and Family Counseling. (3:3:0) S. Prerequisite: H.D.F.R. 580, Ed. R. and S. 625 and consent of instructor. F. Anderson
792. Seminar in Marriage Counseling. (3:3:0) S. Staff
- 794 (295). Special Topics in Human Development. (1-3:1-3:0) A.W.S. F. Anderson, K. Cannon, Porter
- 795 (New). Special Topics in Family Relationships. (1-3:1-3:0) A.W.S. F. Anderson, K. Cannon, Porter

These courses also count in H.D.F.R.:

- Education: Instruction 325. Arts and Crafts for Early Childhood. (2:4:0)
- Education: Instruction 340. Children's Literature. (3:3:0)
- Nursing 288. Family Health and Home Nursing. (2:1:3)
- Psychology 321. Psychology of Adolescence. (3:3:0)
- Recreation 371. Planning for Family and Neighborhood Recreation. (2:2:0)
- Sociology 403. Marriage and the Family in American Society. (3:3:0)

Humanities

Lower Division Course

- 101 (New). An Introduction to the Humanities.** (5:5:0) A.W.S. (G-HA)

Monson, Staff

A study of the forms of creative expression as revealed in literature, painting, sculpture, architecture, and music. (Two hours' credit from this class may be applied toward fulfilling the general education requirement in literature. The three remaining hours may be counted toward fulfilling the humanities requirement, but the student must also take courses in a third department from those listed under humanities and aesthetics.)

Upper Division Course

- 459 (New). Lyric Theatre.** (3:3:0) Su. (G-HA)

Staff

Personnel for summer music dramas, providing experience and direction in music, acting, dance, and theatre arts.

Industrial Arts and Drawing

Professor: Snell (emeritus).

Assistant Professors: Gamett, McArthur.

Instructors: Pierce (chairman, 368 ESC), McKinnon.

Majors are offered in industrial arts education and vocational industrial education. Minors are offered in industrial arts, drawing, and farm mechanics. A farm mechanics minor cannot be used with an industrial arts major.

Credit in shop courses and drawing is given on the basis of three hours for nine hours application each week during the quarter.

For a major, a sequence of courses must be followed as outlined by the department.

REQUIREMENTS FOR THE INDUSTRIAL ARTS EDUCATION CERTIFICATE

Students who plan to become teachers are encouraged to seek advisement early concerning the secondary teacher-education program. Any attempt to complete one phase ahead of schedule complicates the smooth functioning of the program. Students who do not begin professional preparation until the senior year will find it necessary to devote a part of the fifth year to complete the program.

General Education Requirements

See "General Education Requirements." These requirements are the same for all students who graduate from the University. They should be distributed throughout the four-year program.

Academic Preparation

Major (50 quarter hours).

Drawing*: 6 hours, Drawing 102, 109, 113.

Woodwork: 12 hours, Ind. Arts 101, 103, 104, and 3 hours selected from Ind. Arts 105, 302, 303, 304.

Metalwork: 12 hours, Ind. Arts 120, 125, 130, 140.

Craftwork: 8 hours, Ind. Arts 260, 464, 466; Art 263.

Electricity: 6 hours, Ind. Arts 360 and 365.

Shop Maintenance: 3 hours, Ind. Arts 301.

Electives*: 3 hours.

*Note: If drawing is selected as the teaching minor, the elective hours should be increased to 9 hours and drawing omitted from the major requirements.

Minor (24 quarter hours)

Drawing 102, 109, 113, 204, 245, 246, 248, 341, 380.

Industrial Arts 101, 103, 140, 260; 4 hours electives in drawing and electricity and 5 additional hours selected in consultation with the chairman of the Industrial Arts Department.

Professional Preparation

The courses which complete this requirement are listed below in the sequence in which they should be taken under plan "C." (See College of Education.)

	Hours	Laboratory
Health 362* Health Education	3	None
E.R.S. 550* Guidance Service in Public Schools	3	None
E.R.S. 305 Development and Learning	6	Observation TBA
I.A. 377 Basic Classroom Procedures and Methods	4	Participation (B.Y.U. H.S.)
I.A. 478 Unit Planning, Teaching, and Objectives of Industrial Arts	4	Public School
I.A. 370** Shop Planning and Organization	3	None
I.A. 479 Student Teaching	7	Public School
Ed. Instr. 450 Principles of Teaching	3	None
Ed. Adm. 310** The State, the School, and the Teacher	3	None
Ed. Phil. 415 Educational Values	3	None

*May be taken any time in sequence.

**By advisement this course may be taken earlier in the program.

Note: Any deviation from the above sequence must be approved in writing by the department.

Vocational Industrial Education

Option I. Major (69 hours)

Areas	Required Hours	Suggested Courses
Drawing	15	Drawing 102, 113, 245, 341, 380
Electricity	6	Ind. Arts 360, 365
Metalwork	12	Ind. Arts 120, 125, 130, 140
Woodwork	24	Ind. Arts 101, 103, 104, 301, 302, 303, 304, 308, 309
Related Ind. Arts	12	Ind. Arts 119, 306, 307, 330, 401, 403
Minor: Related Field	20	

Option II. Major (69 hours)

Areas	Required Hours	Suggested Courses
Metalwork	20	Ind. Arts 120, 125, 130, 140, 150, 320, 330, 466
Electricity	6	Ind. Arts 360, 365
Woodwork	29	Ind. Arts 101, 103, 104, 105, 108, 301, 302, 303, 304, 308, 309.
Related Ind. Arts	14	Ind. Arts 119, 306, 307, 319, 401, 403
Minor: Drawing	20	

Non-teaching Minors

Industrial Arts (20 hours)

Drawing: 6 hours—Drawing 102, 113.

Ind. Arts: 14 hours selected from 101, 103, 104, 120, 125, 140, 360, 365.

Farm Mechanics (20 hours)

Drawing 102.

Industrial Arts: selected from 103, 120, 125, 150, 205, 207, 308, 365, 401, 403.

INDUSTRIAL ARTS

Lower Division Courses

- 101 (27). Wood and Metal Finishing.** (3:1:5) A.W. Staff
Preparation of surfaces for the application of finishes. Staining, painting, varnishing, lacquering, polishing, etc. Use of brush and air gun.
- 103 (30). Woodwork.** (3:1:5) A.W.S. McKinnon
Care and use of hand and machine woodworking tools applied in fundamental principles of sawing, joining, fitting, and fastening. Required of all majors and minors in industrial arts.
- 104, 105 (31, 32). Woodwork.** (3:1:5 ea.) W.S. Prerequisite: Industrial Arts 103. McKinnon
Use of hand and machine tools in the construction of fine furniture. Drawings, specifications, and cost estimates of all projects must be submitted.
- 108 (21). Wood Turning.** (2:0:4) W. McKinnon
Exercises and projects in spindle and face plate turning.
- 119 (28). Upholstery.** (2:0:4) A.W. Gamett
Typical forms of upholstery, including foundations with and without springs.
- 120 (11). Acetylene Welding.** (3:1:6) A.W.S. Staff
Fusion welding of mild steel and brazing.
- 125 (12). Electric Welding.** (3:1:6) A.W.S. Staff
Fusion welding of mild steel and oxy-acetylene cutting.
- 130 (10). Machine Practice.** (3:1:5) A.W.S. McArthur
Use of hand tools in bench work, with engine lathe, drill press and grinding operations.
- 140 (19). Sheet Metal and Ornamental Iron.** (3:1:5) S. Staff
Projects in sheet metal, ornamental iron work, and pattern layout.
- 150 (16). Forge Practice.** (3:1:5) W. Staff
Fundamental forge operations including bending, shaping, welding, and tempering.
- 205 (17). Farm Machinery.** (2:0:4) S. Staff
Care and maintenance of general farm equipment.
- 207 (18). Gas and Diesel Engines.** (3-5:1:5-9) Staff
Designed for agricultural students. Care and maintenance of gas and diesel engines.
- 260 (60). Recreational Handicrafts.** (1-3:0:2-6) A.W.S. McArthur
Students may work in a selected area according to their interests: woodwork, metalwork, plastics, lapidary work, etc. Course is open to all students interested in leisure time activities.
- 301 (123). Shop Maintenance.** (3:1:5) W. Staff
Care and maintenance of tools and machines.
- 302, 303 (125, 126). Cabinet Construction.** (3:1:5 ea.) W.S. Prerequisite: Industrial Arts 103, 104. McKinnon
- 304 (124). Mill Work.** (3:1:5) S. Prerequisites: Industrial Arts 103, 104; Drawing 113. Staff
Doors, windows, moldings, and other mill practices are stressed.
- 306 (170). Standard Construction Methods.** (3:3:0) S. Taught alternate years. McKinnon
Theoretical aspects of building, location, soil conditions, footings, material, and equipment.

- 307 (171). **Estimating.** (3:3:0) S. Taught alternate years. Prerequisite: Drawing 244. Snell
Interpreting plans and specifications. Methods of estimating and figuring costs of materials and labor.
- 308 (116). **Carpentry.** (3:1:5) A. Prerequisites: Drawing 102 or 113. McKinnon
Practical problems in forming framing, sheathing, and insulation.
- 309 (117). **Carpentry.** (3:1:5) W. McKinnon
Practical problems in interior and exterior trim.
- 319 (128). **Upholstery.** (2:0:4) A.W. Prerequisite: Industrial Arts 119. Gamett
Advanced work in upholstery.
- 320 (112). **Welding.** (3:1:5) A.W.S. Prerequisites: Industrial Arts 120 and 125. Staff
Advanced work in acetylene and electric welding.
- 330 (110). **Machine Practice.** (3:1:5) A.W.S. Prerequisite: Industrial Arts 130. McArthur
Operations in the use of the lathe, shaper, and milling machines.
- 350 (130). **Pattern Making and Foundry Practice.** (2:0:4) W. Prerequisite: Industrial Arts 103. Staff
Principles of pattern making taught through wood patterns and sand castings of machine parts.
- 360 (145). **Electricity.** (4:2:4) W.S. McArthur
Fundamentals of electricity, including DC and AC motors and generators.
- 365 (146). **Electricity.** (2:1:3) W. McArthur
Simple electrical circuits in homes and farm buildings.
- 401 (122). **Masonry.** (2:1:5) S. Pierce
Practice in laying up cinder or concrete blocks into simple walls as needed for farm structures.
- 403 (119). **Plumbing.** (2:1:5) A. McKinnon
Plumbing and plumbing layout.
- 464 (64 or 164). **Plastics.** (2:1:3) S. McArthur
Fundamental hand and machine operations used in working plastics.
- 466 (100). **Art Metal Crafts.** (2:0:4) Staff
Projects in metal. Hand tooling in brass, copper, and aluminum; soldering and spinning.
- 490 (180). **Special Problems in Industrial Arts.** (Arr.) A.W.S. Staff
Credit and subject matter to be arranged.

INDUSTRIAL ARTS EDUCATION

- 370 (160). **Shop Planning and Organization.** (3:3:3) A. McArthur
Planning and organizing the physical plant for different types of school shops.
- 377 (120). **Basic Classroom Procedures and Objectives of Industrial Arts.** (4:3:3) S. Prerequisite E.R.S. 305. Gamett
Classroom procedures and objectives of industrial arts. A fee of \$15.00 is charged.
- 478 (138). **Unit Planning and Teaching.** (4:3:4) A. Prerequisite: I.A. 377. Gamett
For course description and fees see Education: Instruction 478.

- 479 (139). Secondary Student Teaching.** (7:1:20) A.W.S. Prerequisites: I.A. 478 and completion of two-thirds of courses required for teaching major and minor. Gamett

For course description and fees see Education: Instruction 479.

DRAWING

Lower Division Courses

- 102 (4). Blue Print Reading.** (3:2:2) A.W.S. Pierce
A fundamental course in blue print reading. Covers instruction necessary to understand the purposes of and the relation between, specifications and drawings as used in industry.
- 107 (42). Free-hand Lettering.** (2:0:4) A.W.S. Staff
Practice in lettering as applied in engineering and architectural drawing.
- 109 (9). Industrial Arts Design.** (2:2:0) A.W. Pierce
Fundamental elements and processes of design in industrial arts. Required of teaching majors.
- 113 (43). Elementary Drawing.** (3:1:5) A.W.S. Prerequisite: Drawing 102. Pierce
Care and use of instruments, lettering, applied geometry, and orthographic projection. A beginning course for students interested in drawing.
- 204 (New). Electrical and Sheet Metal Layout.** (2:1:3) S. Prerequisite: Drawing 102. Pierce
Required of drawing minors. Pierce
Intersections, developments and triangulation; electrical symbols, lighting and service layouts.
- 244 (44). Architectural Drawing.** (3:1:5) A.W. Prerequisite: Drawing 102 or equivalent. Snell
Drawing of architectural details of footings, walls, doors, windows, cornices, etc.
- 245 (45). Architectural Drawing.** (3:1:5) A. Prerequisite: Drawing 113 or equivalent. Snell
Small-house plans, elevations, sections and details.
- 246 (46). Descriptive Geometry.** (3:1:5) S. Prerequisite: Drawing 113 or equivalent. Snell
Principles relating to point, line, plane, cylinder, cone, and double curved surfaces, etc. with application to practical problems. Required of architectural students and vocational industrial arts majors and minors in drawing.
- 248 (47, 48). Instrumental Perspective, Shades and Shadows.** (3:1:5) A.W.S. Prerequisite: Drawing 245. Snell
Theory and application of methods of drawing architectural perspectives with shades and shadows.
- 249 (49). Rendering.** (2:1:3) A.W.S. Prerequisite: Drawing 248. Snell
Wash rendering practice plates and rendering of architectural elements.

Upper Division Courses

- 341, 342, 343 (140, 141, 142). Architectural Design.** (3:1:5 ea.) A.W.S. Prerequisites: Drawing 113, 245 or equivalent. Snell
Original design by the student. Problem to be passed upon by instructor. Complete set of plans with one display of problem chosen.
- 354 (150). Topographical Drawing.** (3:1:5) A.W.S. Prerequisites: Drawing 113 or equivalent. Snell
Topographical symbols, mapping and plotting.
- 380 (New). Mechanical Drawing.** (3:1:5) S. Prerequisites: Drawing 102, 113. Pierce

495 (180). Special Problems in Drawing. (1-3:0:6) A.W.S.
Credit and subject matter to be arranged.

Staff

These courses also count in Industrial Arts and Drawing:

Art 110. Theory and Practice of Design. (2:2:2)

Art 263. Crafts. (2:2:4)

Industrial Management

(See courses in Business Management.)

Italian

(See courses in Languages.)

Japanese

(See courses in Languages.)

Journalism

Professor: O. R. Smith (chairman 160 SSC).

Assistant Professor: Butterworth.

Instructors: Burnett, Carle*, L. H. Curtis.

The curriculum of the Department of Journalism is designed to provide specialized training for students preparing to enter the following fields of journalism: newspaper and news service newsgathering and editing; radio and television news and advertising; public relations and industrial journalism; and teaching of journalism in secondary schools. Through courses 101 and 305 the department also contributes toward the general education offerings in the field of humanities and aesthetics. Graduate courses are offered leading to the master's degree in journalism.

A student who elects to major in journalism will pursue one of the course sequences listed below:

I. Editorial Journalism: minimum of 40 credit hours in journalism including courses 211, 212, 311, 312, 321, 322, 323, 305, 307, 490. Recommended electives are courses 101, 315, 330; Physics 177.

Typical Schedule of Courses

Freshman and Sophomore Years		Physics 177 4	
	Hours	Minor Field and electives (7 hours)	
General Education (73 hours)		Junior and Senior Years	
		Hours	
Religion	12	General Education (12 hours)	
Physical Science	9	Religion	12
Biological Science	8	Major Field (28 hours)	
English (composition)	9	Journalism 305, 307, 311, 312,	
Phys. Ed., Health	5	315, 321, 322, 323, 330, 490....	30
Humanities (incl. Pol. Sci. 110) ..	15	Minor Field and electives (51 hours)	
Social Sci.(incl. Hist. 121)	15		
Major Field (13 hours)			
Journalism 101, 211, 212	9		

II. Radio-Television Journalism: minimum of 40 credit hours in journalism, including Journalism 211, 307, 490, Speech 241, and 14 hours selected from Journalism 212, 305, 341, 346, 347, 348, 351, 352, 494, 495, 496; Education: Instruction 307 and Business Management 455. Students who wish to specialize in news broadcasting should elect Journalism 212, 346, 347, 348. Students who specialize in broadcasting advertising should elect Journalism 351, 352; Business Management 455. Recommended electives for either specialization are Journalism 101, 305.

Related courses in other departments recommended for radio-television majors are Physics 103, Speech 251, 255, 349, 352, 353, 354.

Typical Schedule of Courses

Freshman and Sophomore Years		Biological Science		8
	Hours	Soc. Sci. (incl. Pol. Sci. 110)	15	
General Education (73 hours)		Humanities (incl. Hist. 121)	15	
Religion	12	Major Field (12 hours)		
English (composition)	9	Journalism 101, 211, 212	9	
Phys. Ed., Health	5	Speech 241	3	
Physical Science	9	Minor Field and electives (8 hours)		

Junior and Senior Years**Hours**

General Education (12 hours)	
Religion	12
Major Field (28 hours)	

Journalism 307, 341, 346, 347, 351, 352, 490	23
Journalism electives	5
Minor Fields and other electives (53 hours)	

III. Public Relations and Industrial Journalism: minimum of 40 credit hours in journalism, including courses 101, 211, 212, 490, 497, 561, 564, 566, and Business Management 455. Recommended electives are courses 305, 311, 312, and 571.

The student should select a composite minor of 30 or more hours from at least two of the following course groups: Accounting 230; Business Management 340, 420; Economics 101, 331, 461, 576; Psychology 111, 330, 335, 337, 455; Sociology 111, 314, 320, 446. (At least 20 hours should be concentrated in two departments.)

Typical Schedule of Courses**Freshman and Sophomore Years****Hours**

General Education (73 hours)	
Religion	12
English (composition)	9
Phys. Ed., Health	5
Physical Science	9
Biological Science	8
Soc. Sci. (incl. Pol. Sci. 110)	15
Humanities (incl. Hist. 121)	15
Major Field (9 hours)	
Journalism 101, 211, 212	9
Electives and Minor Fields (20 hours)	

Junior and Senior Years**Hours**

General Education (12 hours)	
Religion	12
Major Field (31 hours)	
Journalism 490, 497, 561, 564, 566	16
Journalism electives (incl. Bus. Mgt. 455)	15
Minor Fields and other electives (50 hours)	

Preparation for Teaching

Students who plan to teach journalism in secondary schools may elect either a conventional editorial journalism major and minor or a composite major in language arts. In either case the 36-hour list below may be used for journalism as the major field of interest or the 24-hour list for journalism as the minor field. Appropriate teacher education courses are prescribed by the College of Education.

36-hour list: Journalism 211, 212, 305, 321, 322, 490; fourteen hours from Journalism 101, 311, 312, 313, 315, 316, 330, 331; Physics 177.

24-hour list: Journalism 211, 212, 321, 322, 490; seven hours from Journalism 311, 312, 313, 316, 330, 331.

Additional Course Recommendations

The programs listed above may be modified to allow for previous experience or individual needs upon permission of the head of the department. For especially qualified students individual programs may be outlined in photo journalism, advertising or community journalism.

Journalism majors are advised to obtain as broad a background as possible in the social sciences. Two years' study in a foreign language are recommended. Majors must have ability to operate a typewriter.

In filling the American history and government requirement of the University it is recommended that journalism majors take Political Science 110 and either History 121 or Economics 274. (These should be taken in place of History 170 or 180.)

Requirements for a Minor

Twenty hours in journalism, selected from one of the course sequences for majors listed above.

The following are suggested as minors for students who major in journalism: business management, economics, English, food and nutrition, geography, history, languages, political science, psychology, sociology or speech.

Lower Division Courses

- 101 (1). Introduction to Mass Communications.** (3:3:0) A.W.S. (G-HA) Staff
Survey of historical, social, cultural, functional and vocational aspects of journalism, with emphasis on the layman as a "consumer" of news.
- 211 (61). News Writing.** (3:3:2) A.W.S. Prerequisite: English 113 or equivalent, or permission of department head. Staff
Newspaper style and elements of news; practice in gathering and writing news stories. Use of typewriter required.
- 212 (62). Reporting.** (3:1:6) W.S. Prerequisite: Journalism 211. Staff
News gathering techniques; practice in handling special assignments such as sports, society, politics, conventions and police news.

Upper Division Courses

- 305 (105). History of Mass Communications.** (5:5:0) S. (G-HA) Smith
Development of American journalism from its colonial beginnings to the present, in relation to political, social, and economic history of the times. Emergence of media of radio and television.
- 307 (107). Law of Mass Communications.** (3:3:0) S. Staff
Legal limits and privileges of press and radio; libel, contempt, public documents, copyright and right of privacy. Problems in avoiding criminal and civil liabilities.
- 311 (161, 162). Reporting Workshop.** (3:1:9) A.W.S. Prerequisite Journalism 212. Staff
Supervised work in regular staff positions on the campus newspaper, involving writing of news and feature copy. Conferences with instructor on problems of news gathering and writing.
- 312 (179). Advanced Reporting Workshop.** (3:0:9) A.W.S. Prerequisite: Journalism 212, and consent of instructor. Staff
Internship in gathering and writing news with supervision from staff members of a general-circulation newspaper. Regular conferences with instructor.
- 315 (121). Press Photography.** (4:2:6) W. Prerequisite: Physics 177 or equivalent. Staff
Principles of photography for newspapers and periodicals; laboratory exercises in use of photographic equipment for taking and developing news and advertising pictures.
- 316, 317, 318 (122, 123, 124). Press Photography Workshop.** (1:0:3 ea.) A.W.S. Prerequisite: Journalism 315 or consent of instructor. Staff
Individual projects requiring completion of photographic assignments for campus and commercial publications; weekly conferences with instructor on special problems in press photography.
- 321 (185). News Editing.** (3:2:3) A.W. Prerequisite: Journalism 211. Butterworth
Copyreading, proofreading, headline writing, and arrangement of both telegraph and local copy for newspapers. Special problems in handling sectional stories.
- 322 (185). Newspaper Makeup.** (3:1:6) W.S. Prerequisite: Journalism 321. Butterworth
Theory and practice of newspaper makeup; use of type faces, pictures, typographical devices for effective newspaper design and display; newspaper analysis.

- 323 (171, 172). Editing Workshop. (3:1:9) A.W.S. Prerequisite: Journalism 322.** Butterworth
Practical editing experience in responsible positions on the campus newspaper. Conferences with instructor on progress.
- 330 (130). Newspaper Advertising. (2:2:0) A.** Staff
Organization and operation of the advertising department of the newspaper. Rates, procedures, and promotion for display and classified advertising.
- 331, 332, 333 (131, 132, 133). Advertising Sales and Promotion. (2:0:6 ea.)** Staff
A.W.S.
Preparation of copy and layouts, and sale of local advertising in the campus newspaper. Conferences with the instructor on advertising promotion and field work in servicing advertising accounts.
- 341 (141). Radio-TV News Writing. (3:2:2) A. Prerequisite: Journalism 211.** Carle
Radio and TV news styles, types and sources; practice in writing and editing news copy for broadcast.
- 346, 347, 348 (146, 147, 148). Radio-TV News Workshop. (2:0:6 ea.) A.W.S. Prerequisite: Journalism 341.** Carle
Practical projects in gathering and writing news for broadcast. For qualified students, practice in TV news filming. Conferences on news problems.
- 351 (149). Radio and Television Advertising. (3:3:0) W.** L. H. Curtis
Business and advertising principles of radio and television. Survey of the commercial background of broadcasting.
- 352 (150). Radio-TV Commercial Continuity Writing. (3:3:0) S.** Carle
Study of all types of commercial writing for radio and television. Practice in writing announcements, formats, promotion and production spots. Use of typewriter required.
- 490 (106). Practices and Problems in Mass Communications. (5:5:0) W.** Butterworth
Comprehensive senior seminar, required of all majors, encompassing review of entire field while analyzing policies, practices, problems of the mass media as social instruments.
- 491 (191). Projects in Editorial Journalism. (Arr.) A.W.S. Prerequisite: consent of instructor.** Smith
- 494 (192). Projects in Radio-TV Journalism. (Arr.) A.W.S. Prerequisite: consent of instructor.** Carle
- 497 (193). Projects in Public Relations. (Arr.) A.W.S. Prerequisite: consent of instructor.** Butterworth

Advanced Undergraduate or Graduate Courses

- 561 (135). Public Relations. (3:3:0) S.** Butterworth
Philosophy and practice of public relations in business, governmental, educational and other institutions. Study of various publics, media and publicity methods.
- 564 (118). Public Opinion Polls and Surveys. (3:3:0) A.** Smith
Survey methods in opinion and attitude research: construction of questionnaires; sampling; procedures in telephone, mail, and personal interview surveys; evaluation of survey data. Application in a field project.
- 566 (180). Industrial Magazine Editing. (3:3:0) W.** Staff
Principles and techniques of layout and design as related to the editing of magazines and special booklets; formats, titles, engraving, color utilization, and printing processes.

- 571 (111).** Magazine Article Writing. (3:3:0) A. Butterworth
Study of non-fiction articles for general magazines, specialized publications, and newspaper sections; assignments in planning and writing articles. Criticism, analysis of manuscript markets, and help in selling articles written in the course.

Graduate Courses

- 671 (241).** Research Methods in Mass Communications. (3:3:0) A. Smith
672 (242). Mass Communications and Society. (4:4:0) W. Smith
674 (233). Teaching Methods in Journalism. (3:3:0) Su. Carle
Teaching methods for journalism in the secondary school and junior college. Planning and supervising school newspapers; disseminating school news in the public media.
676 (204). School Yearbook and Magazine Production. (2:2:0) Su. Staff
Planning and supervising production of school yearbooks and magazines, including aspects of illustration, copy, layout, printing, binding and business management.
690 (250). Seminar in Mass Communications. (Arr.) S. Staff
691, 692, 693 (291, 292, 293). Special Studies in Journalism. (Arr.) A.W.S. Staff
694 (294). Readings in Mass Communications. (Arr.) A.W.S. Staff
699 (300). Thesis for Master's Degree. (Arr.) A.W.S. Staff

These courses also count in Journalism:

Business Management 455. Advertising. (5:5:0)

Education: Instruction 307. Motion Picture Photography. (3:3:1)

Education: Instruction 608. Radio and Television in Education. (2:2:1)

Physics 177. Photography. (4:3:3)

Speech 241. Introduction to Radio and Television Broadcasting. (3:3:2)

Landscape Architecture

(See courses in Horticulture and Horticultural Specialties.)

Languages

Professors: Lee (chairman, 326 McK), Barker (emeritus), de Jong, Nibley, Rogers, Watkins.

Associate Professors: V. L. Anderson, H. D. Taylor, Wilkins.

Assistant Professors: J. R. Clark III, Valentine.

Instructors: C. D. Anderson*, Gibson, Gubler, Smithson*.

The study of a foreign language is a unique educational experience. It is a means by which the student can participate in the inner life of another people and share its culture. Through the study of a foreign language, the student also comes to learn his own language much better. The poet and philosopher Goethe said, "He who knows no other language, does not know his own."

The objectives of the courses in the Department of Languages are:

1. To prepare students for the teaching profession, government work at home and abroad, international trade, L.D.S. missions in foreign countries, and research leading to advanced degrees.
2. To teach the student to understand and to speak the language with facility and to develop skill in reading and writing.
3. To provide a survey of foreign literatures and to acquaint the student with foreign cultures.

Languages required for B.Y.U. Degrees. Every degree of Bachelor of Arts and Master of Arts granted by the University requires the completion of the equivalent of at least 24 hours of an approved foreign language. The degree of Doctor of Philosophy to be granted by this University requires reading proficiency in two foreign languages, one of which must be French or German.

Library and Laboratory Facilities. The department has an experienced and competent staff as well as good library facilities. It also has one of the most modern and best equipped language laboratories in the United States. All presently available electronic recording and playback equipment is at the disposal of more than sixty students every hour, permitting a strong emphasis to be placed on acquiring good pronunciation and speaking fluency. The tape library contains some of the best dramatic and poetic works in the principal languages of the world.

Credit for Study in High School. For students who have had the opportunity to study a foreign language in high school, the 24-hour language requirement for the B.A. degree may be proportionately reduced for each unit of high school work completed. Students who have completed one year of secondary school language work will register for the second quarter of the language. Those with two years of high school work will register for the third quarter, unless they are given permission by the department to register for second-year college work. Students with three years of high school work will be permitted to register for the first quarter of second-year college work.

Special Examination for Foreign Residence. Students who have had foreign residence may, with the consent of the department, obtain up to 24 hours of special foreign language credit. This may be done in two ways: (1) by successfully completing a more advanced course in the language; (2) by passing a series of examinations administered by the department. Foreign students may not get credit in this way for their native language.

Prospective Graduate Students. Prospective graduate students are reminded that a second, and sometimes a third, language will be required of them in graduate school. It is advisable that work in at least one other language be started before the junior year. Graduate students who have the consent of the instructor may register for certain undergraduate literature courses.

Major and Minor Requirements

In French, Spanish, German, Latin, Greek, and Hebrew, the department offers programs leading to a departmental major or minor with the Bachelor of Arts degree. The requirement for a major is 27 hours of upper division credit. The requirement for a minor is 18 hours of upper division credit. The department reserves the right to specify certain courses to be used toward a degree in these foreign languages. Areas that serve as minors include a second foreign language, English, one of the fine arts, history, political science, sociology, etc.

MODERN LANGUAGES

French

The requirement for a major is 27 hours of upper division courses which must include French 321, 322, 323, 431, 432, 433, 441, 442, 443.

The requirement for a minor is 18 hours of upper division courses which must include 9 hours from the following groups: French 321, 322, 323, 431, 432, 433, 441, 442, 443.

Lower Division Courses

101, 102, 103 (1, 2, 3). First Year French. (5:5:1 ea.) A.W.S. (G-HA)

Clark, Lee, Staff
Designed for those who have had no French. Pronunciation, reading, the fundamentals of grammar. Special emphasis on conversation and the building of a substantial vocabulary.

201, 203 (101, 103). Second Year French Reading and Conversation. (3:3:1 ea.) A.W.S. Prerequisite: French 103 or three units of French in high school or consent of instructor. Must be taken with 202 and 204. Clark, Lee, Staff

202, 204 (102, 104). Second Year French Conversation and Grammar. (2:2:0 ea.) A.W.S. Prerequisite: French 103 or three units of French in high school. Must be taken with 201 and 203. Clark, Lee, Staff

Upper Division Courses

301, 302, 303 (115, 116, 117). Gospel in French. (2:2:0 ea.) A.W.S. Prerequisite: 25 hours of French or consent of instructor. Clark

Discussions of the gospel message and the reading of scripture in French. The aim of this course is to give the student practice in conversation and to widen his knowledge of the gospel.

311 (105, 106). Selected Readings. (3:3:0) S. Prerequisite: French 203, 204 or consent of the instructor. Staff

Extensive readings of elementary and intermediate edited texts.

321, 322, 323 (121, 122, 123). French Composition and Conversation. (3:3:0 ea.) A.W.S. Prerequisite: 25 hours of French or equivalent. Staff

431, 432, 433 (131, 132, 133). Masterpieces of French Literature. (3:3:0 ea.) A.W.S. (†G-HA) Prerequisite: 25 hours of French or consent of instructor. Lee

441, 442, 443 (111, 112, 113). Survey of French Literature and Culture. (3:3:0 ea.) A.W.S. (†G-HA) Prerequisite: French 203, 204, or consent of instructor. Clark

General view of the literary periods, movements, and social background, with representative readings.

491, 492, 493 (107, 108, 109). Individual Study in French. (1-3:1-3:0 ea.) A.W.S. Staff

Assignments are made to fit the individual needs of advanced students.

Graduate Courses

601 (201).	French Composition and Conversation. (3:3:0) S.	Lee
621 (Ling. 231).	Introduction to Romance Philology. (3:3:0) A.	Clark
622 (Ling. 246).	Old French Morphology and Phonology. (3:3:0) A.	Clark
631 (231).	Old French Literature. (3:3:0) W.	Lee
633 (233).	French Literature of the Renaissance. (3:3:0) S.	Clark
634 (234).	French Literature of the 17th Century. (3:3:0) A.	Lee
635 (235).	French Literature of the 18th Century. (3:3:0) W.	Clark
637 (237).	French Literature of the 20th Century. (3:3:0) W.	Lee
641 (241).	Moliere. (3:3:0) W.	Clark
651 (251).	French Drama of the 19th Century. (3:3:0) S.	Clark
652 (252).	Modern French Drama. (3:3:0) W.	Lee
653 (253).	French Novel of the 19th Century. (3:3:0) S.	Clark
654 (254).	Modern French Novel. (3:3:0) A.	Lee
661 (261).	Introduction to French Civilization. (3:3:0) A.	Lee
691, 692, 693 (291, 292, 293).	French Seminar. (2:2:0 ea.) A.W.S.	Clark, Lee
699 (300).	Thesis for Master's Degree.	Staff

German

The requirement for a major is 27 hours of upper division courses which must include German 321, 322, 323, 431, 432, 433, 441, 442, 443.

The requirement for a minor is 18 hours of upper division courses which must include 9 hours from the following groups: German 321, 322, 323, 431, 432, 433, 441, 442, 443.

Lower Division Courses

- 101, 102, 103 (1, 2, 3). First Year German. (5:5:1 ea.) A.W.S. (G-HA)
Anderson, Rogers, Watkins, Gubler

Designed for those who have not had German. Pronunciation, reading, fundamentals of grammar. Special emphasis on conversation and the building of a substantial vocabulary.

- 201, 203 (101, 103). Second Year German Reading and Conversation. (3:3:1 ea.) A.W.S. Prerequisite: German 103 or three units of German in high school or consent of instructor. Must be taken with 202 and 204.
Anderson, Rogers, Watkins, Gubler

- 202, 204 (102, 104). Second Year German Conversation and Grammar. (2:2:0 ea.) A.W.S. Prerequisite: German 103 or three units of German in high school or consent of instructor. Must be taken with 201 and 203.
Anderson, Rogers, Watkins, Gubler

Upper Division Courses

- 301, 302, 303 (115, 116, 117). Gospel in German. (2:2:0 ea.) A.W.S. Prerequisite: 15 hours of German or consent of instructor. Staff

Discussions of the gospel message and the reading of scripture in German. The aim of this course is to give the student practice in conversation and to widen his knowledge of the gospel.

- 311 (105, 106).** Selected Readings. (3:3:0) S. Prerequisite: German 203, 204, or consent of the instructor. Staff
Extensive readings of elementary and intermediate edited texts.
- 307, 308, 309 (167, 168, 169).** Scientific German. (3:3:0 ea.) A.W.S. Anderson, Gubler
- 321, 322, 323 (121, 122, 123).** German Composition and Conversation. (3:3:0 ea.) A.W.S. Prerequisite: 25 hours of German or equivalent. Watkins
- 431, 432, 433 (131, 132, 133).** Masterpieces of German Literature. (3:3:0 ea.) A.W.S. (†G-HA) Prerequisite: 25 hours of German or consent of instructor. Anderson, Gubler
- 441, 442, 443 (111, 112, 113).** Survey of German Literature and Culture. (3:3:0 ea.) A.W.S. (†G-HA) Prerequisite: German 203, 204. Watkins, Rogers
General view of literary periods, movements, and social background with representative readings.
- 491, 492, 493 (107, 108, 109).** Individual Study in German. (1-3:1-3:0 ea.) A.W.S. Staff
Assignments are made to fit the individual needs of advanced students.

Advanced Undergraduate or Graduate Courses

- 541 (241).** Lessing. (3:3:0) A. (G-HA) Rogers
- 542 (242).** Schiller. (3:3:0) W. (G-HA) Rogers
- 543 (243).** Goethe. (3:3:0) S. (G-HA) Rogers

Graduate Courses

- 601 (201).** German Composition and Conversation. (3:3:0) A. Watkins
- 637 (237).** Contemporary German Literature. (3:3:0) A. Anderson, Rogers
- 651 (251).** The German Drama. (3:3:0) A. Anderson
- 654 (254).** The German Novel. (3:3:0) W. Anderson
- 656 (256).** The German Novelle. (3:3:0) S. Anderson
- 658 (258).** German Lyric Poetry. (3:3:0) W. Rogers
- 661 (261).** Cultural History of Germany. (3:3:0) W. Watkins
- 666 (Ling. 266).** Gothic and Introduction to Comparative German Philology. (5:5:0) W. Watkins
- 667 (Ling. 267).** Old High German and Old Saxon. (3:3:0) W. Watkins
- 668 (Ling. 268).** Middle High German. (3:3:0) A. Watkins
- 691 (Ling. 291).** Seminar in Philology. (2:2:0) S. Watkins
- 694 (294).** Seminar in Literature. (2:2:0) S. Staff
- 699 (300).** Thesis for Master's Degree. Staff

Italian

Lower Division Courses

- 101, 102, 103 (1, 2, 3).** First Year Italian. (5:5:0 ea.) A.W.S. (G-HA) Not given this year. Gibson, Watkins
Special attention to accurate pronunciation for benefit of students of

music and art for whom Italian has special interest and value. Grammar and graded reading.

201, 203, 205 (101, 103, 105). **Second Year Italian.** (3:3:1 ea.) A.W.S. Prerequisite: Italian 103 or two units of Italian in high school. Watkins

202, 204, 206 (102, 104, 106). **Second Year Italian.** (2:2:0 ea.) A.W.S. Prerequisite: Italian 103 or three units of Italian in high school. Watkins.

Upper Division Courses

431, 432, 433 (111, 112, 113). **Masterpieces of Italian Literature.** (3:3:0 ea.) (†G-HA) Prerequisites: Italian 105, 106, or consent of instructor. Watkins
Extensive and intensive reading from Italian masterpieces.

491, 492, 493 (107, 108, 109). **Individual Study in Italian.** (1-3:1-3:0 ea.) A.W.S. Watkins
Assignments made to fit the individual needs of the advanced students.

Japanese

Upper Division Courses

101, 102, 103 (1, 2, 3). **First Year Japanese.** (5:5:1 ea.) A.W.S. (G-HA) Staff
Constant study of the writing systems. Fundamentals of grammar and the building of a substantial vocabulary. Easy conversation and composition throughout.

201, 203, (101, 103, 105). **Second Year Japanese.** (3:3:0 ea.) A.W.S. Prerequisite: Japanese 103 or consent of instructor. Staff

202, 204, 206 (102, 104, 106). **Second Year Japanese.** (2:2:0 ea.) A.W.S. Prerequisite: Japanese 103 or consent of instructor. Staff
Assignments made to fit the individual needs of advanced students.

Upper Division Course

491, 492, 493 (107, 108, 109). **Individual Study in Japanese.** (1-3:1-3:0 ea.) A.W.S. Staff
Assignments made to fit the individual needs of advanced students.

Portuguese

Lower Division Courses

101, 102, 103 (1, 2, 3). **First Year Portuguese.** (5:5:1 ea.) A.W.S. (G-HA) de Jong
A beginning course. Pronunciation, conversation, reading, and fundamentals of grammar. Special attention to Portuguese as the language of Brazil.

201, 203, 205 (101, 103, 105). **Second Year Portuguese.** (3:3:1 ea.) A.W.S. Prerequisite: Portuguese 103 or three units of Portuguese in high school. Staff

202, 204, 206 (102, 104, 106). **Second Year Portuguese.** (2:2:0 ea.) A.W.S. Prerequisite: Portuguese 103 or two units of Portuguese in high school. Staff

Upper Division Courses

321, 322, 323 (121, 122, 123). **Portuguese Composition and Conversation.** (3:3:0 ea.) A.W.S. Prerequisites: Portuguese 104 and 106; 25 hours of Portuguese or the equivalent. de Jong

- 431, 432, 433 (111, 112, 113). Masterpieces of Brazilian and Portuguese Literature. (3:3:0 ea.) A.W.S. (†G-HA) Prerequisites: Portuguese 105 and 106 or consent of instructor. de Jong
- 491, 492, 493 (107, 108, 109). Individual Study in Portuguese. (1-3:1-3:0 ea.) Assignments are made to fit the individual needs of advanced students.
- 601, 602, 603 (201, 202, 203). Portuguese Composition and Conversation. (3:3:1 ea.) A.W.S. de Jong

Graduate Courses

- 631 (231). Introduction to Portuguese Literature. (3:3:0) A. de Jong
- 632 (232). Portuguese Literature. (3:3:0) W. de Jong
- 633 (233). Contemporary Portuguese Literature. (3:3:0) S. de Jong
- 655 (255). Introduction to Brazilian Literature. (3:3:0) A. de Jong
- 656 (256). Brazilian Literature. (3:3:0) W. de Jong
- 657 (257). Contemporary Brazilian Literature. (3:3:0) S. de Jong
- 694 (294). Portuguese Seminar. (3:3:0) de Jong
- 696 (296). Individual Study. (1-3:1-3:0) Staff
- 699 (300). Thesis for Master's Degree. (1-6:1-6:0) Staff

Russian

Lower Division Courses

- 101, 102, 103 (1, 2, 3). First Year Russian. (5:5:1 ea.) A.W.S. (G-HA) Gubler
Designed for those who have had no Russian. Pronunciation, reading, fundamentals of grammar, and building of a substantial vocabulary.
- 201, 203, 205 (101, 103, 105). Second Year Russian. (3:3:1) A.W.S. Prerequisite: Russian 103. Gubler
Readings in Russian literature.
- 202, 204, 206 (102, 104, 106). Second Year Russian. (2:2:0 ea.) A.W.S. Prerequisite: Russian 103. Gubler

Upper Division Courses

- 431, 432, 433 (111, 112, 113). Masterpieces of Russian Literature. (3:3:0 ea.) A.W.S. (†G-HA) Prerequisites: Russian 205, 206 or consent of instructor. Gubler
- 491, 492, 493 (107, 108, 109). Individual Study in Russian. (1-3:1-3:0 ea.) A.W.S. Gubler
Assignments are made to fit individual needs of advanced students.

Spanish

The requirement for a major is 27 hours of upper division courses which must include Spanish 321, 322, 323, 431, 432, 433, 441, 442, 443. Spanish 451, 452, 453 are strongly recommended.

The requirement for a minor is 18 hours of upper division courses which must include 9 hours from the following groups: Spanish 321, 322, 323, 431, 432, 433, 441, 442, 443.

Lower Division Courses

- 101, 102, 103 (1, 2, 3). First Year Spanish.** (5:5:1 ea.) A.W.S. (G-HA)
 Taylor, Valentine, Wilkins, Staff
 Designed for those who have not had Spanish. Pronunciation, reading, and fundamentals of grammar. Special emphasis on conversation and the building of a substantial vocabulary.
- 201, 203 (101, 103). Second Year Spanish Reading and Conversation.** (3:3:1 ea.)
 A.W.S. Prerequisite: Spanish 103 or three units of Spanish in high school or consent of instructor. Must be taken with 202 and 204.
 Taylor, Valentine, Wilkins, Staff
- 202, 204 (102, 104). Second Year Spanish Conversation and Grammar.** (2:2:0 ea.) A.W.S. Prerequisite: Spanish 103 or three units of Spanish in high school or consent of instructor. Must be taken with 201 and 203.
 Taylor, Valentine, Wilkins, Staff

Upper Division Courses

- 301, 302, 303 (115, 116, 117). Gospel in Spanish.** (2:2:0 ea.) A.W.S. Prerequisite: 25 hours of Spanish or consent of instructor.
 Valentine
 Discussions of the gospel message and the reading of the scriptures in Spanish. The aim of this course is to give the student practice in conversation and to widen his knowledge of the gospel.
- 311 (105, 106). Selected Readings.** (3:3:0) S. Prerequisite: Spanish 203, 204, or consent of instructor.
 Staff
 Extensive reading of elementary and intermediate edited texts.
- 321, 322, 323 (121, 122, 123). Spanish Composition and Conversation.** (3:3:0 ea.) A.W.S. Prerequisites: Spanish 203, 204.
 Valentine
- 431, 432, 433 (131, 132, 133). Masterpieces of Spanish and Spanish-American Literature.** (3:3:0 ea.) A.W.S. (†G-HA) Prerequisite: 25 hours of Spanish or consent of instructor.
 Valentine, Taylor, Wilkins
- 441, 442, 443 (111, 112, 113). Survey of Spanish Literature and Culture.** (3:3:0 ea.) A.W.S. (†G-HA) Prerequisites: Spanish 203, 204 or consent of instructor.
 Taylor
- 451 (157). Introduction to Spanish-American Literature and Culture.** (3:3:0) A.
 Wilkins
- 452 (158). Modern Mexican Novel.** (3:3:0) W. Prerequisites: Spanish 205, 206, or consent of instructor.
 Wilkins
- 453 (159). Modern South American Novel.** (3:3:0) S. Prerequisites: Spanish 205, 206, or consent of instructor.
 Wilkins
 Lectures on and class discussion of nineteenth and twentieth century South American novels.
- 491, 492, 493 (107, 108, 109). Individual Study in Spanish.** (1-3:1-3:0 ea.) A.W.S.
 Staff
 Assignments are made to fit the individual needs of advanced students.

Advanced Undergraduate or Graduate Students

- 511 (New). Materials and Techniques in Teaching Spanish.** (3:3:0) A. Prerequisite: Spanish 323 or consent of instructor.
 Staff
- 561 (151). Drama of the 20th Century in Spain.** (3:3:0) W. Prerequisites: Spanish 205, 206, or consent of instructor.
 Taylor
- 571 (171). Spanish Seminar.** (3:3:0) S. Prerequisite: consent of department head.
 Taylor, Valentine, Wilkins
 Research problems for advanced students.

Graduate Courses

- 601 (201). Spanish Composition and Conversation. (3:3:0) A. Taylor, Wilkins
- 621 (231). Medieval Literature. (3:3:0) A. Prerequisite: Spanish 433 or equivalent. Taylor
- 622 (236). Spanish Literature of the 19th Century. (3:3:0) W. Prerequisite: Spanish 443 or equivalent. Taylor
- 623 (237). Literature of the 20th Century in Spain. (3:3:0) W. Prerequisite: Spanish 443 or equivalent. Taylor
- 631 (261). Hispanic American Civilizations of the Colonial Period. (3:3:0) A. Valentine
- 632 (262). Hispanic American Civilizations of the Modern Period. (3:3:0) W. Valentine
- 633 (263). Hispanic American Essay. (3:3:0) S. Wilkins
- 651 (Ling. 251). History of the Spanish Language. (3:3:0) W. Clark
- 655 (255). Spanish-American Poetry. (3:3:0) S. Valentine
- 661 (251). Drama of the 20th Century in Spain. (3:3:0) S. Prerequisite: Spanish 443 or equivalent. Taylor
- 665 (233). Drama of the Spanish Golden Age. (3:3:0) W. Prerequisite: Spanish 443 or equivalent. Taylor
- 667 (New). Drama in Spanish America. (3:3:0) A. Prerequisite: Spanish 443 or equivalent. Wilkins
- 671 (252). Spanish Novel of the 19th Century. (3:3:0) A. Prerequisite: Spanish 443 or equivalent. Taylor
- 675 (232). Cervantes' Don Quixote. (3:3:0) (Not given this year.) Prerequisite: Spanish 443 or equivalent. Valentine
- 681 (New). Short Story in Spanish America. (3:3:0) W. Prerequisite: Spanish 443 or equivalent. Wilkins
- 694 (294). Spanish Seminar. (3:3:0) A.W.S. Valentine, Taylor, Wilkins
- 699 (300). Thesis for Master's Degree. Staff

CLASSICAL LANGUAGES

Latin

For Major and Minor Requirements Consult Department Chairman

Lower Division Courses

- 101, 102, 103 (1, 2, 3). First Year Latin. (5:5:0 ea.) A.W.S. (G-HA) Clark
Designed for those who have not had Latin. Mastery of pronunciation, declensions, and conjugations. Correlation of Latin originals with English derivatives. Graded reading. Characteristics of Roman civilization.
- 201, 203, 205 (101, 103, 105). Second Year Latin. (3:3:0 ea.) A.W.S. Prerequisite: Latin 103 or three units of Latin in high school. Clark
Readings from Caesar, Livy, etc., with a review and continuation of grammar.
- 202, 204, 206 (102, 104, 106). Second Year Latin. (2:2:0 ea.) A.W.S. Prerequisite: Latin 103. Clark
Latin grammar.

Upper Division Courses

- 340 (140). **Pre-Legal Latin. (3:2:0) A.** **Clark**
Recommended for pre-legal students. Admission by consent of instructor.
- 341, 342 (141, 142). **Pre-Medical Latin and Greek. (3:2:0 ea.) W.S.** **Clark**
Recommended for pre-medical students. Admission by consent of instructor.
- 491, 492, 493 (107, 108, 109). **Individual Study. (1-3:1-3:0 ea.) A.W.S.** **Clark**

Graduate Courses

- 667, 668, 669 (267, 268, 269). **Cicero, Virgil; Latin Style and Composition. (3:3:0 ea.) A.W.S.** **Clark**
- 677, 678, 679 (277, 278, 279). **Horace; the Latin Poets; the Latin Dramatists. (3:3:0 ea.) A.W.S.** **Clark**
- 681, 682, 683 (281, 282, 283). **The Latin Fathers. (3:3:0 ea.) A.W.S.** **Prerequisite: consent of instructor.** **Nibley**
- 699 (300). **Thesis for Master's Degree.** **Staff**

Greek

For Major and Minor Requirements Consult Department Chairman

Lower Division Courses

- 101, 102, 103 (1, 2, 3). **Elementary Greek. (5:5:0 ea.) (G-HA) A.W.S.** **Nibley**

Graduate Courses

- 664, 665, 666 (264, 265, 266). **Advanced Readings in Greek. (3:3:0 ea.) A.W.S.** **Prerequisite: consent of instructor.** **Nibley**
- 667, 668, 669 (267, 268, 269). **The Greek New Testament. (3:3:0 ea.) A.W.S.** **Prerequisite: one year of Greek.** **Nibley**
- 671, 672, 673 (271, 272, 273). **Individual Study in Greek. (2-3:2-3:0 ea.) A.W.S.** **Nibley**
- 677, 678, 679 (277, 278, 279). **Greek Prose Writers. (2-3:2-3:0 ea.) A.W.S.** **Prerequisite: two years of Greek.** **Nibley**
- 699 (300). **Thesis for Master's Degree.** **Staff**

Semitics

Hebrew, Aramaic, Akkadian, Egyptian

For Semitic languages other than Arabic, see Division of Religion, Semitic Languages. The courses in Semitic languages carry credit in religion and fulfill the language requirements for the A.B. degree.

Lower Division Courses

- 101, 102, 103 (1, 2, 3). **First Year Arabic. (5:5:1 ea.) A.W.S. (G-HA)** **Nibley**
The modern spoken language. Designed for those who have had no Arabic.

Graduate Courses

(See Division Religion for courses in Hebrew, Aramaic, Syriac, Akkadian and Egyptian.)

Linguistics

Lower Division Course

- 160 (60). Practical Phonetics.** (3:3:0) A.W.S. de Jong
 Elementary principles of speech mechanics in their relation to correct diction.

Upper Division Course

- 360 (160). Advanced Phonetics.** (3:3:0) W. de Jong

Graduate Course

- 601 (201). Introduction to Linguistics.** (3:3:0) S. Staff

Latin

(See courses in Languages and Religion.)

L.D.S. Church Organization and Administration

(See courses in Religion.)

Library Science

Knight (chairman, 185 Library).

Instructors: Berry, Chandler, Flake, R. Hansen, G. D. Jensen, Munk, Nash, Purdy, Rich, Starrs, Thorne, Tolman.

The library science program is organized to fill the needs of school and public librarians, teachers and students who wish to become familiar with library use, and those who wish to do advanced study in a professional library school. All of the following courses will be taught one or more times during a two-year period, including summer sessions.

Students wishing to take a minor (20 credit hours) in library science should plan to take courses 111, 350, 351, and 363. Other courses may be chosen according to the professional interests of the student.

Lower Division Courses

- 111 (11). Use of Books and Libraries.** (2:2:0) A.W.S.Su. Staff
Efficient use of library materials; card catalog; use of general reference books (bibliographies, dictionaries, encyclopedias, and indexes); and making of bibliographies.

Upper Division Courses

- 350 (150). Classification.** (3:3:0) W.Su. Jenson
Devoted to theory and principles governing classification of books according to the Dewey Decimal system. Practical problems in classifying books.
- 351 (151). Cataloging.** (3:2:2) W.Su. Jenson
Elementary cataloging of books. Author, subject and title entries. Laboratory period cataloging materials for school and public libraries. Must be able to type. Both Library Science 350 and 351 must be taken to receive credit for either.
- 363 (163). Library Science for Teachers and Administrators.** (3:3:0) A.Su. Knight
Organization and use of school libraries. Units on book selection and use of reference books. (Library Science 350, 351 and 363 fill creditation requirements for school libraries.)
- 370 (170). Introduction to Bibliography.** (3:3:0) A.W. Staff
Intensive study of content and use of reference books such as encyclopedias, dictionaries, indexes, yearbooks, bibliographies, atlases, and biographies. Bibliography form stressed. Reference department serves as a laboratory.

Advanced Undergraduate or Graduate Courses

- 563 (263). Modern Library Practices.** (3:3:0) Su. Berry
- 565 (165). Selection and Use of Library Materials for the Elementary Schools.** (3:3:0) W.Su. Thorne
Library service in elementary schools considered as it concerns selection, acquisition, and use of materials—books, periodicals, pictures, etc. Units on story telling and library instruction.
- 567 (167). Selection and Use of Library Materials for the Secondary School** (3:3:0) S.Su. Staff
Critical survey of literature for young people—reading guidance, book selection and reviewing. Selection and use of library materials as they relate to the curriculum.

- 571 (271).** Bibliography of the Sciences. (3:3:0) Not given this year. Staff
572 (272). Bibliography of the Humanities. (3:3:0) Su. Staff
573 (273). Bibliography of the Social Sciences. (3:3:0) S. Staff
590 (290). History of Books and Development of Libraries in Our Civilization. Staff
(3:3:0) Su.

Graduate Course

- 650 (250).** Problems in Acquisition and Organization of Library Materials. Rich
(3:3:0) Su.

These courses also count in Library Science:

Education: Instruction 305. Audio-Visual Education. (3:3:1)

Education: Instruction 340. Children's Literature. (3:3:0)

Linguistics

(See courses in Languages.)

Management

(See courses in Business Management and Economics and Management of the Home.)

Marketing

(See courses in Business Management.)

Mathematics

Professor: Marshall.

Associate Professors: Fletcher (chairman, 278 ESC), McNamara.

Assistant Professors: Fearnley, Olpin, Robinson.

Instructors: Haupt, Hillam, Nielsen, Wickes.

Students majoring in mathematics are required to complete 27 upper division credit hours in mathematics which must be approved by the chairman of the department.

Students minoring in mathematics are required to complete Mathematics 234 and 3 hours of upper division credit hours in mathematics.

For entrance requirements into the College of Physical and Engineering Sciences see page 138 of this catalog.

A student desiring to teach in the secondary schools with mathematics as his specialization must have only 9 hours of upper division credit hours, but must have 33 hours of education courses as listed on page 114. In this case, his degree will be in education rather than in mathematics. A student may get a degree in mathematics and also a teaching certificate by taking 27 hours of upper division mathematics and 33 hours of required professional educational courses.

Suggested Sequence of Courses

Freshman Year				Junior Year			
	A	W	S		A	W	S
Mathematics 231, 232, 233....	5	5	5	Mathematics 371, 372, 373			
English 111, 112, 113	3	3	3	or 311, 312, 313	3	3	3
Chemistry 111, 112	5	5		Mathematics 307			3
Zoology 105 or Botany 101 ..			5	German 101, 102, 103	5	5	5
Physical education	1	1	1	Philosophy 310			3
Health 130		2		English (literature)	4		
Religion	2	2	2	Social science		5	
				Elective	2	2	2
	16	18	16	Religion	2	2	
					16	17	16
Sophomore Year				Senior Year			
	A	W	S		A	W	S
Mathematics 234, 235	3	3		Mathematics 551, 552, 553			
Mathematics 339 or 347			3	or 521, 522, 523	3	3	3
Physics 211, 212, 213	5	5	5	Mathematics 541, 542, 543	3	3	3
History 170			5	German 307, 308, 309	3	3	3
Social science			5	Philosophy 511	3		
Biological science		5		Elective	0	2	2
Elective	2	2	2	Religion		2	2
Religion	2	2	2				
	17	17	17		15	16	16

Remedial Course

51 (X). Plane Geometry. (0:5:0) A.

Staff

Equivalent to one year of high school plane geometry.

Lower Division Courses

101 (1). Intermediate Algebra. (5:5:0) A.W.S.Su.

Staff

Prescribed for students who have had less than one and one-half years of high school algebra.

- 103 (3). Solid Geometry.** (3:3:0) A.W.S. Not given this year. **Staff**
Equivalent to one semester of high school solid geometry.
- 111 (11). College Algebra.** (5:5:0) A.W.S.Su. Prerequisite: Mathematics 101 or its equivalent. **Staff**
- 112 (12). Plane Trigonometry.** (5:5:0) A.W.S. Prerequisite: Mathematics 101 or its equivalent. **Staff**
- 231, 232, 233 (13, 91, 92). Analytic Geometry and Calculus.** (5:5:0 ea.) A.W.S. **Staff**
Coordinate geometry, introduction to differential and integral calculus, and applications of calculus.
- 234 (93). Calculus and Differential Equations.** (5:5:0) A.S. **Staff**
Systematic treatment of integration and an introduction to ordinary differential equations.

Upper Division Courses

- 307 (New). History of Mathematics.** (3:3:0) A. **Fearnley**
A study of the development of mathematics with emphasis on the personalities behind it.
- 311, 312 (New). Numerical Analysis.** (3:3:0 ea.) A.W. Prerequisite: Mathematics 234. **Staff**
Solutions of algebraic equations, interpolation, finite differences, solution of differential equations, digital computation.
- 313 (New). Numerical Analysis Laboratory.** (2:0:6) S. Prerequisite: Mathematics 312. **Staff**
Application of numerical analysis using a digital computer.
- 316 (106). Engineering Mathematics.** (3:3:0) A.W. **Staff**
Fourier series, partial differential equations, Bessel functions, vector analysis.
- 317 (107). Engineering Mathematics.** (3:3:0) W.S. **Staff**
LaPlace transform, complex analysis.
- 318 (New). Engineering Mathematics.** (3:3:0) S. **Staff**
Matrix algebra, Boolean algebra, elementary statistics, numerical methods and probability.
- 334 (111). Introduction to Differential Equations.** (3:3:0) A.Su. **Staff**
Introduction to ordinary differential equations with applications.
- 335 (112). Differential Equations.** (3:3:0) W.Su. **Staff**
Systematic treatment of ordinary differential equations and introduction to partial differential equations.
- 339 (113). Vector Analysis.** (3:3:0) S. **Staff**
Vector analysis as applied to physics and the engineering sciences.
- 347 (131). Theory of Equations.** (3:3:0) W. **Fearnley**
Elementary properties and solutions of algebraic equations.
- 357 (135). Foundations of Geometry.** (3:3:0) Su. **Staff**
- 371, 372, 373 (New). Introduction to Abstract Algebra.** (3:3:0 ea.) A.W.S. **Robinson**
Basic algebraic concepts, particular number systems, and abstract algebraic systems.
- 377 (134). Foundations of Algebra.** (3:3:0) Su. **Staff**

- 387 (New). **Theory of Numbers.** (3:3:0) S. Fearnley
 Foundations of number theory, congruences, residues, reciprocity law,
 and diophantine equations.
- 521, 522, 523 (161, 162, 163). **Introduction to Statistics.** (3:3:0 ea.) A.W.S. Pre-
 requisite: Mathematics 233. Staff
 Basic probability theory and introduction to the theory, methods and ap-
 plications to statistics.

Advanced Undergraduate or Graduate Courses

- 541, 542, 543 (191, 192, 193). **Advanced Calculus.** (3:3:0 ea.) A.W.S. Fletcher
 Advanced treatment of differential and integral calculus.
- 551, 552, 553 (New). **Introduction to Topology.** (3:3:0 ea.) A.W.S. Not given
 this year. Fearnley
 An axiomatic treatment of linearly ordered spaces including properties of
 closed sets, connected sets, and separable sets; elementary plane topology,
 metrization, applications to analysis.

Graduate Courses

- 617, 618, 619 (221, 222, 223). **Mathematical Physics.** (3:3:0 ea.) A.W.S. Staff
- 631, 632, 633 (231, 232, 233). **Complex Analysis.** (3:3:0 ea.) A.W.S. Not given
 this year. Fearnley
- 641, 642, 643 (201, 202, 203). **Functions of a Real Variable.** (3:3:0 ea.) A.W.S.
 Not given this year. Staff
- 647, 648, 649 (211, 212, 213). **Partial Differential Equations.** (3:3:0 ea.) Not
 given this year. Fletcher
- 671, 672, 673 (New). **Modern Algebra.** (3:3:0 ea.) A.W.S. Not given this year.
 Robinson
- 681, 682, 683 (New). **Linear Algebra.** (3:3:0 ea.) Robinson
- 695 (292, 293, 294). **Readings in Mathematics.** (1-3:1-3:0) Staff
- 699 (300). **Thesis for Master's Degree.** Staff

These courses also count in Mathematics:

Physics 321, 322, 323. **Theoretical Mechanics.** (4:4:0 ea.)

Mechanical Engineering Science

Associate Professors: Baxter (chairman, 126 ELB), Simonsen.

Assistant Professor: Cannon.

Instructor: Gardner.

This department offers a five-year program leading to the degree of Bachelor of Engineering Science in Mechanical Engineering. The student completing the prescribed course of study will receive a broad and comprehensive training in mechanical engineering, in addition to the general and religious education given to all undergraduate students at Brigham Young University.

Entrance Requirements

In addition to having fulfilled the general entrance requirements of the University, described on page 72, a student entering this department must have completed successfully 3 units of high school mathematics which must include elementary algebra, intermediate algebra and plane geometry, and three units of English.

Students who have not met these requirements must take extra remedial courses as prescribed by the chairman of this department before or concurrently with the regular course of study outlined below.

Requirements for Major

To obtain a degree the student must complete the course described below, and must work at least one summer during his last three years of residence in an industry related to the field. The student should consult with the department chairman in advance regarding his summer employment. The following abbreviations are used in the description: Ch.E. for chemical engineering; C.E., for civil engineering; E.E., for electrical engineering; G.E., for geological engineering; and M.E., for mechanical engineering.

Grade Requirements

A student must have received an average grade of "C" or better in calculus and physics before being admitted as a regular third-year student in the department. A student who has not obtained this average may petition for special consideration. If he is admitted, it will be on a probationary basis subject to periodic review. If his work subsequently proves unsatisfactory, he will be dropped from the department.

In addition to the regular university academic requirements, a grade of "C" or higher is required in all prescribed courses taken after being admitted as a third-year student. If a grade lower than "C" is received in any prescribed course, the course must be repeated.

General Education Group Requirements

The general education requirements are listed in the section of this catalog titled Requirements for Graduation together with the elective subjects which the student may select. Group I is automatically filled by following the course described below. Any course listed in the general education requirements is acceptable for filling the remaining groups. The student will observe that allowance has been made for only 69 hours of general group subjects within the formal program. This implies that he must usually take advantage of the possibility of cross-referencing six hours of credit between the humanities and the aesthetics or social science groups and the religion group requirement.

Students in the AFROTC program may substitute three hours of air science

for the required three hours of physical education. In addition, they may substitute three hours of air science for any of the general education requirements. These substitutions will be accepted as satisfying the graduation requirements only if the student completes the AFROTC program.

First Year			
	A	W	S
Chem. 105, 106, 107	4	4	4
Math. 111, 112, 231	5	5	5
English 111, 112, 113 ..	3	3	3
Physical Education	1	1	1
Religion (6)			
Health Education (2)			
Group Elective (5)	4-5	5-4	5
M. E. 100 (1)			
Total Hours	17-18	18-17	18

Second Year			
	A	W	S
Math. 232, 233, 234	5	5	5
Physics 211, 212, 213	5	5	5
Eng. Graphics 201, 202, 203	3	3	3
Electives (9)			
Religion (6)	5	5	5
Total Hours	18	18	18

Third Year			
	A	W	S
Math. 316, 317	3	3	0
C.E. 301, 302, 303	4	4	5
M.E. 320, 321, 322	3	3	5
Chem. 378, 379	2	2	0
M.E. 331	0	3	0
M.E. 360	0	2	0
Religion (4)			

Group Electives (7)	4	0	7
(cross-reference 3 with Religion)			
Total Hours	16	17	17

Fourth Year			
	A	W	S
C.E. 401	0	3	0
M.E. 410, 411	4	0	3
M.E. 430, 431, 432	3	3	5
M.E. 441	3	0	0
M.E. 461	0	2	2
E.E. 301, 302, 303	4	4	4
Geology 110	0	4	0
Group Electives	3	0	2
(cross-reference 3 with religion)			
Total Hours	17	16	16

Fifth Year			
	A	W	S
M.E. 531	0	3	0
M.E. 535	3	0	0
M.E. 590	0	0	1
Bus. Mgmt. 340	0	5	0
Restricted electives	6	6	6
Group Electives	5	3	6
Total Hours	14	17	13

Restricted Electives
 Three credit hours: M.E. 520, 522, 531, 541, 551, 552, 571, 572, 583, 585, 587, 599, 610, 635.
 Four credit hours: M.E. 581.

Lower Division Course

- 100 (1). Engineering Orientation. (1:1:0) A.W.S.** Staff
 Introduction to the fields and profession of engineering. Required for all freshman engineering students.

Upper Division Courses

- 320 (120). Thermodynamics I. (3:3:0) A.** Prerequisites: Mathematics 234, Physics 213. Staff
 First law and applications, thermodynamic systems, properties of gases, liquids, and vapors. Second law and applications, entropy; properties of gaseous mixtures, fluid flow; combustion.
- 321 (121). Thermodynamics II. (3:3:0) W.** Staff
 Continuation of M.E. 320.
- 322 (122). Thermodynamics Applications. (5:5:0) S.** Staff
 Continuation of M.E. 321, including gas and vapor cycles and applications to machinery; refrigeration; compression of gases; air-water vapor mixtures.
- 327 (123). Elements of Thermodynamics. (4:4:0) A.** Prerequisites: Mathematics 234, Physics 213. Staff
 First and second laws; properties of systems; thermodynamics of gases

and vapors; applications to thermodynamic cycles. Designed for students not majoring in mechanical engineering.

- 330 (130). Mechanisms.** (3:2:3) S. Prerequisite or parallel: Civil Engineering 302. Staff
 Motions and velocities of machine parts. For students not majoring in mechanical engineering.
- 331 (New). Manufacturing Processes.** (3:2:3) W. Staff
 A survey of general manufacturing processes, including smelting, refining, casting, cutting, machining, welding and joining of engineering materials. A course integrating lectures with field inspection trips to applicable industries.
- 360 (124). Thermodynamics Laboratory I.** (2:1:3) W. Prerequisite: Mechanical Engineering 320. Staff
 Instruments for measuring pressure, temperature, speed power, and area; flow meters; technical report writing.
- 367 (127). Elements of Thermodynamics Laboratory.** (1:0:3) A.W.S. Staff
 Laboratory to follow Mechanical Engineering 327.
- 410 (110). Fluid Mechanics.** (4:3:3) A.W.S. Prerequisites: Mathematics 234, Civil Engineering 302, Mechanical Engineering 320 or 323. Staff
 Physical properties of fluids; fluid statics; viscous flow; dimensional analysis; incompressible flow; compressible flow; fluid meters; lift and drag; dynamic similarity; momentum; fluid machinery.
- 411 (112). Fluid Dynamics.** (3:3:0) S. Staff
 Continuation of Mechanical Engineering 410.
- 430 (133). Kinematics of Machines.** (3:0:6) A. Prerequisite: Civil Engineering 302. Staff
 Velocities and accelerations in machine parts; rolling contact; cams, gearing, flexible connectors, etc.
- 431 (134). Machine Design I.** (3:3:0) W. Prerequisites: Mechanical Engineering 430 and Civil Engineering 303. Staff
 Theory and design of machine elements; proportioning of machine parts according to the laws of mechanics and engineering materials.
- 432 (135). Machine Design II.** (5:3:6) S. Staff
 Continuation of Mechanical Engineering 431.
- 441 (141). Heat Transfer.** (3:3:0) A. Prerequisites: Mechanical Engineering 322, Mathematics 317. Staff
 Fundamental principles of heat transfer by conduction, convection, and radiation.
- 460, 461 (125, 126). Heat Power Laboratory I, II.** (2:1:3 ea.) W.S. Prerequisites: Mechanical Engineering 322, 360. Staff
 Steam turbines; internal combustion engines; heat transfer; pumps; calorimetry; air compressors, refrigeration; steam generators; technical reports.

Advanced Undergraduate or Graduate Courses

- 520 (220). Advanced Thermodynamics.*** (3:3:0) Prerequisites: Mechanical Engineering 322 and Mathematics 317. Staff
 Extended treatment of the fundamentals of thermodynamics including transient conditions, equilibrium, combustion and real gases.
- 522 (222). Fuels and Combustion.*** (3:3:0) Prerequisite: Mechanical Engineering 322. Staff
 Properties of fuels; characteristics of air-fuel mixtures; combustion characteristics; calculations.

- 530 (New). Principles of Automatic Control.** (3:3:0) W. Prerequisites: Mechanical Engineering 432 and Mathematics 317. Staff
Transfer functions applied to mechanical, hydraulic, pneumatic and electrical components and their combustion. Block diagrams, Nyquist and Routh Criteria, Bode's and Root Locus Plots. Integral and error rate compensation. Non-linear systems.
- 531 (New). Special Topics in Machine Design.*** (3:3:0) Staff
Selected topics in the behavior of engineering materials and advanced mechanics of materials as applied to the design of machine members.
- 535 (137). Mechanical Vibrations.** (3:3:0) A. Prerequisites: Mathematics 317, Civil Engineering 303. Staff
Fundamentals of simple vibrating systems with applications.
- 541 (225). Advanced Heat Transmission.*** (3:3:0) Prerequisite: Mechanical Engineering 441. Staff
Extension of Mechanical Engineering 441 to include numerical and approximate methods of solution, transient problems and solution of problems by analogy methods.
- 551 (151). Time and Motion Study.*** (3:2:3) Staff
Principles of motion economy, techniques of motion and time study and their interrelationship.
- 552 (152). Production and Quality Control.*** (3:3:0) Staff
Basic concepts of quantitative and qualitative control in industrial organizations of both manufacturing and service types. To include principles of materials-handling affecting the above concepts.
- 571 (171). Refrigeration.*** (3:3:0) Prerequisite: Mechanical Engineering 322. Staff
Cycles and analysis; selection of systems and component parts; estimation of loads.
- 572 (172). Heating, Ventilating and Air Conditioning.*** (3:3:0) Prerequisite: Mechanical Engineering 322. Staff
Heating and cooling for comfort. Design of warm air, hot water and steam heating systems for residence and commercial buildings.
- 581 (181). Internal Combustion Engines.*** (4:3:3) Prerequisite: Mechanical Engineering 322. Staff
Basic principles; theoretical and actual cycles; performance characteristics.
- 583 (183). Steam and Gas Turbines.*** (3:3:0). Prerequisites: Mechanical Engineering 322, 411. Staff
Analysis and design of nozzles, blades and other components of steam and gas turbines; cycle analysis.
- 585 (185). Gas Turbine and Jet Engine Power Plants.*** (3:3:0) Prerequisites: Mechanical Engineering 322, 411. Staff
Analysis of cycles and performance of gas turbine, jet engine and rocket propulsion systems, including flow through component parts.
- 587 (187). Power Plant Engineering.*** (3:3:0) Prerequisite: Mechanical Engineering 322. Staff
Analysis of power plants, including performance of prime movers, economics, and heat balance studies.
- 590 (190). Mechanical Engineering Problems.** (1:0:3) S. Prerequisite: fifth year standing. Staff
Selected problems from the field which will enable the student to integrate his fundamental knowledge in their solution.

- 599 (New). Undergraduate Research.** (Arr.) Prerequisite: consent of department chairman. Staff

Graduate Courses

- 610 (210). Fluid Dynamics and Machinery.*** (3:3:0) Prerequisites. Mechanical Engineering 411 and Mathematics 315. Staff
Steady and unsteady flow of compressible and incompressible fluids; principles of operation of fluid dynamical machinery.
- 635 (232). Advanced Vibration Analysis.*** (3:3:0) Prerequisite: Mechanical Engineering 535. Staff
Vibration characteristics of systems with several degrees of freedom, elastic bodies, systems with transient vibrations, and simple none-linear systems.

*Offered upon approval of department chairmen and upon sufficient demand.

Medical Technology

(See College of Biological and Agricultural Sciences.)

Modern and Classical Languages

(See courses in Languages.)

Music

Professors: Halliday (chairman, 250 C), de Jong, Jepperson-Madsen (emeritus), Franklin Madsen (emeritus).

Associate Professors: Earl, Gates, Martino, Sardoni.

Assistant Professors: Buggert (emeritus), C. Cannon, Gulbrandsen, Hanson (emeritus), Keeler, H. Laycock, R. Laycock, Nordgren, Wakefield, Weight, R. Woodward.

Instructors: Ballou, Bos, Bradley, Bradshaw, Brownlee, Cheney, Cundick, Curtis, Edlefsen, Freed, Fitzroy, Fuerstner, Groesbeck, Mathews, McAllister (emeritus), Nelson, Terry, Weinzinger, M. Woodward, Wilkes.

Music Majors

A baccalaureate degree in music can be taken with a major in applied music, music theory, or music education (secondary). The curriculum for a major in applied music or music theory leads to the Bachelor of Arts degree. The curriculum for a major in music education leads to either the Bachelor of Arts or the Bachelor of Science degree.

Music Minors

Any twenty hours in music constitutes a graduation minor.

Music Education Minors

Elementary:

Prospective elementary school teachers who desire a minor in music should take Music 101, 170, 190, 191, 192, 301, 3 hours of ensemble (band, orchestra, or chorus), and 6 hours of class or private piano.

Secondary:

A—Instrumental: Prospective secondary school teachers who desire a teaching minor in instrumental music take the following courses: Music 101, 190, 301, 302, 6 hours of band or orchestra; 10 hours from the following: 160-p, 360-p (on instrumental specialty), 368, 369, 370, 371, 372, 373, 375, 376.

B—Vocal: Prospective secondary school teachers who desire a teaching minor in vocal music take the following courses: Music 101, 6 hours of group and/or private voice, 190, 301, 302, 366, 374, 568; 4 hours of vocal ensemble.

Degree in Applied Music

To receive a Bachelor of Arts degree with a major in applied music, a student must complete the following courses or their equivalent:

	Hours
Music 190, 191, 192, 290, 291, 292	26
Music 301, 302, 383 (count as religion)	6
Music 484, 485	6
*Private instruction on major instrument or voice	24
*Functional Piano	6
Ensemble	12

(Keyboard majors take 7 hours of ensemble plus 4 hours of Music 390, 391 and 1 hour of Music 466.)

Majors in the various fields of applied music must take certain special classes in addition to the above requirements.

Piano majors take Music 563, 564, 565.

Organ majors take Music 390, 467, 468.

Woodwind majors take Music 368, 369.

Brass majors take Music 370, 371.
 String majors take Music 372, 373.
 Voice majors take Music 566, 567, 568.

*The hours to be taken on the specialty and in functional piano may be reduced of a student has already had considerable training in these areas, determined by entrance examinations. At the end of each year of individual instruction, the student takes an examination on his specialty to determine his level of achievement. For the examination, the candidate submits a list of his repertoire indicating compositions or studies especially prepared for the examination. Forms on which record of the student's repertoire is kept, and booklets containing outlines of instrumental and vocal proficiency requirements are available at the Music Department office.

Majors in applied music (except keyboard majors—see ensemble requirements above) participate in a music ensemble each quarter of their undergraduate training. Instrumental majors participate in at least one instrumental ensemble and one vocal ensemble. Voice majors sing in at least two vocal ensembles.

A major in applied music must accumulate at least sixty minutes of recital appearance time either as soloist or chamber music ensemble performer.

The following sequence of courses is recommended for majors in applied music:

Freshman Year				Junior Year			
	A	W	S		A	W	S
Religion	2	2	2	Religion (Music 301, 302, 383)	2	2	2
English	3	3	3	Language (second year)	5	5	
Physical education	1	1	1	Music 360-p	2	2	2
Music 190, 191, 192	4	4	4	Ensembles	1	1	1
Music 160-p	2	2	2	General education	6	6	11
Ensembles	1	1	1				
Health 130		2		Total Hours	16	16	16
Electives (Music 107, 108, 109, if needed)	2	2	2				
or	3	3	3				
Total Hours	15	17	15				
or	16	18	16				
Sophomore Year				Senior Year			
	A	W	S		A	W	S
Religion	2	2	2	Religion	2	2	2
Language (first or second year)	5	5	5	Music 484, 485	3	3	
Music 290, 291, 292	5	5	4	Music 360-p	2	2	2
Music 160-p	2	2	2	Ensembles	1	1	1
Ensembles	1	1	1	General education	3	3	6
Electives	2	2	2	Electives (this must include the special music classes)	5	5	5
Total Hours	17	17	16	Total Hours	16	16	16

Degree in Music Theory

For a Bachelor of Arts degree with a major in music theory, a student completes the following courses or their equivalent:

	Hours
Music 190, 191, 192, 290, 291, 292	26
Music 301, 302, 383 (count as religion)	6
Music 390, 391	4
Music 484, 485	6
Art 501	3
Graduate courses in music literature	6
Graduate courses in music theory	15
Ensemble	6

*Individual instruction on specialty	6
*Functional piano	12

*The hours to be taken in individual or group instruction may be reduced if a student has already had considerable training in these areas, determined by entrance examinations. At the end of each year of individual instruction the student takes an examination on his major instrument or in voice to determine his level of achievement. For the examination, each candidate submits a list of his repertoire indicating compositions or studies especially prepared for the examination. Forms of which record of the student's repertoire is kept and booklets containing outlines of instrumental and vocal proficiency requirements are available at the Music Department office.

Majors in music theory participate in musical ensembles a minimum of six quarters of undergraduate training. The student performs in at least two ensembles. A student whose specialty is a band or orchestral instrument takes three hours of instrumental ensemble and three hours of choral ensemble. A student whose specialty is voice sings in at least two vocal ensembles.

The ability to play the piano is an indispensable tool for music theory majors; consequently, every major in music theory must pass a piano proficiency examination (second year standards) during the first quarter of residence or take group or individual piano instruction until he passes the examination.

The following sequence of courses is recommended for majors in music theory:

Freshman Year				Junior Year			
	A	W	S		A	W	S
Religion	2	2	2	Religion	2	2	2
English	3	3	3	Language (second year) ...	5	5	
Physical education	1	1	1	Music 390, 391		2	2
Music 190, 191, 192	4	4	4	Music 485, 486	3	3	
Music 160-p (specialty)	2	2	2	General education			
Ensembles	1	1	1	requirements:			
Health 130		2		History 180	5		
Electives (Music 107, 108,				Social science		5	5
109, if needed)	2	2	2	Biological science			5
or	3	1	3	Physical science			5
Total Hours	15	17	15	Total Hours	17	17	17
or	16	16	16				
Sophomore Year				Senior Year			
	A	W	S		A	W	S
Religion (Music 301, 302,				Religion	2	2	2
363)	2	2	2	Music theory (grad.			
Language (first or second				courses)	6	6	3
year)	5	5	5	Grad. Courses in Mu. Lit. ..	2	2	2
Music 290, 291, 292	5	5	4	Art 501		3	
Ensembles	1	1	1	General education			
Private piano	2	2	2	requirements:			
Electives	2	2	3	Biological science	3		
				English (literature)		3	
Total Hours	17	17	17	Physical science			4
				Electives	3		5
				Total Hours	16	16	16

Degrees in Music Education

Prospective secondary school teachers may elect a composite music education major, a composite vocal major, or a composite instrumental major.

For the bachelor's degree with a composite music education major, a student completes the following music courses or their equivalent:

	Hours
Music 190, 191, 192, 290, 291, 292	26
Music 301, 302, 383 (count as religion)	6

Music 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373	15 or 16
(The student omits the workshop represented by his specialty.)	
Music 374, 375, 376	6
Music 484, 485	6
*Individual instruction (specialty)	18
*Functional piano	6
Ensemble	6

Band instrumentalists who pursue any one of the music education degrees participate at least one Autumn Quarter in marching band and one Winter Quarter in varsity band (preferably on a minor instrument). Voice majors sing in at least two ensembles.

For the bachelor's degree with a composite vocal major, the student completes the following music courses or their equivalent:

	Hours
Music 190, 191, 192, 290, 291, 292	26
Music 301, 302, 383 (count as religion)	6
Music 366, 568	5
Music 374	2
Music 466 plus 3 quarters of piano accompanying	4
Music 484, 485	6
Music 566, 567	2
*Individual instruction (voice)	18
*Functional piano	12
Vocal ensemble	9

For the bachelor's degree with a composite instrumental major, the student completes the following music courses or their equivalent:

	Hours
Music 190, 191, 192, 290, 291, 292	26
Music 301, 302, 383 (count as religion)	6
Music 375, 376	4
Music 484, 485	6
*Individual instruction (instrumental specialty)	18
Instrumental ensemble	9
Vocal ensemble	3
*Functional piano	6
Music 367, 368, 369, 370, 371, 372, 373	12
(The student omits the workshop represented by his specialty.)	

*The hours to be taken on the specialty and in functional piano may be reduced if a student has already had considerable training in these areas, determined by entrance examinations. At the end of each year the student takes an examination on his major instrument or in voice to determine his level of achievement. For the examinations each candidate submits a list of his repertoire indicating compositions or studies especially prepared for the examination. Forms on which record of the student's repertoire is kept and booklets containing outlines of instrumental and vocal proficiency requirements are available at the Music Department office.

Music education majors must pass piano proficiency examinations appropriate to their majors during the first quarter of residence or take class or private instruction in piano until they pass the examination.

Music education majors must accumulate at least twenty minutes of recital appearance time either as soloists or chamber music performers.

To receive a general secondary teacher's certificate the student is required to take the following courses in addition to those listed above. (The best sequence is indicated.)

For details covering the general teacher's certificate, see The College of Education section of the catalog.

	Hours
Health 362	3
Educational Research and Services 305	6
Music 377	4
Music 478	4
Music 479	7
Educational Administration 310	3
Educational Philosophy and Programs 415	3
Education: Instruction 450	3
It is strongly recommended that music education majors also take Music 527.	

The following sequence of courses is recommended for students electing a Bachelor of Arts degree with a composite music education major and a general secondary teacher's certificate:

Freshman Year				Junior Year			
	A	W	S		A	W	S
Religion	2	2	2	Religion	2	2	2
English	3	3	3	Language (second year)	5	5	
Physical education	1	1	1	Music 367	1		
Physical science	3	3	3	Music 371	2		
Music 190, 191, 192	4	4	4	Music 373	2		
Ensembles	1	1	1	Music 374, 375, 376	2	2	2
Individual instruction on				Music 484, 485	3	3	
specialty	2	2	2	Individual inst. on spec.	2	2	2
Music 107, 108, 109	2	2	2	Health 362			3
Music 363, 364, 365	1	1	1	E.R.S. 305	6		
	—	—	—	Music 377		4	
Total Hours	19	19	19	Social science		5	
					—	—	—
				Total Hours	19	20	18
Sophomore Year				Senior Year			
	A	W	S		A	W	S
Religion (Music 301, 302, 383)	2	2	2	Religion	2	2	2
Language (first or second year)	5	5	5	Social science	5		
Music 290, 291, 292	5	5	4	History 180	5		
Music 366	2			Biological science		3	5
Music 368, 369, 370	2	2	2	English (literature)		3	
Music 372			2	Ed. Inst. 478, 479	4	7	
Ensembles	1	1	1	Ed. Adm. 310			3
Individual inst. on spec.	2	2	2	Ed. Phil. 415			3
Health 130		2		Ed. Instr. 450			3
	—	—	—		—	—	—
Total Hours	19	19	18	Total Hours	16	15	16

The following sequence of courses is recommended for students electing a Bachelor of Science degree with a composite music education major and a general secondary teacher's certificate.

Freshman Year				Sophomore Year			
	A	W	S		A	W	S
Religion	2	2	2	Religion (Music 301, 302, 383)	2	2	2
English	3	3	3	Physical science			3
Physical education	1	1	1	Social science	5		
Music 190, 191, 192	4	4	4	Health 130	2		
Music 363, 364, 365	1	1	1	Music 290, 291, 292	5	5	4
Individual instruction on				Music 366	2		
specialty	2	2	2	Music 367	1		
Functional piano	2	2	2	Music 368, 369, 370	2	2	2
Ensembles	1	1	1	Music 372			2
	—	—	—	Individual inst. on spec.	2	2	2
Total Hours	16	16	16	Ensembles	1	1	1
					—	—	—
				Total Hours	17	17	16

Junior Year				Senior Year			
	A	W	S		A	W	S
Humanities			3	Religion	2	2	2
Religion	2	2	2	Physical science		3	3
English (literature)		3		Biological science	5	3	
History 170 or 180			5	Social science	5		
Music 484, 485		3	3	English (literature)			3
Music 371		2		Ed. Instr. 478, 479	4	7	
Music 373		2		Ed. Adm. 310			3
Music 374, 375, 376		2	2	Ed. Phil. 415			3
Health Ed. 362		3		Ed. Instr. 450			3
E.R.S. 305			6				
Music 377			4	Total Hours	16	15	17
Individual inst. on spec.	2	2	2				
Total Hours	16	18	18				

Recommended sequence of courses for composite vocal or for composite instrumental majors are available at the Music Department office.

Lower Division Courses

- 101 (Mu. Gen. 1). A Survey Course in Music. (3:3:0) A.W.S. (G-HA)** Earl, Wakefield, Wilkes
Non-technical course without prerequisite to increase appreciation and enjoyment of masterpieces of music literature of all periods through study of styles, forms, and composers, through attending and discussing lyceum presentations, and through listening to recordings.
- 102 (Mu. Gen. 2). Fundamentals of Music. (3:3:0) A.W.S.** Groesbeck, Terry
Introductory course in music fundamentals, especially designed for public school teachers.
- 105 (Mu. Gen. 11). Class Piano for Beginners in Music. (2:2:0) A.W.S.** Bradshaw, Brownlee
Minimum of one hour daily practice required outside of class. Instruction in notation of music and in keyboard technique, especially designed for prospective elementary school teachers.
- 106 (Mu. Gen. 12). Class Piano for Beginners in Music. (2:2:0) W.S.** Prerequisite: Music 105. Staff
Minimum of one hour daily practice required outside of class. Continuation of Music 105.
- 107, 108, 109 (Mu. Gen. 61, 62, 63). Group Piano Instruction. (2:2:0 ea.) A.W.S.** Keeler, Wakefield
Not open to piano majors. Class instruction designed for those music majors and minors who cannot pass the piano proficiency examination.
- 110 (Mu. Appl. 1, 2, 3, 4, 5, 6). University Chorale. (1:0:3) A.W.S. (G-HA)** Participation in Oratorio Choir required. R. Woodward
- 116 (Mu. Appl. 7, 8, 9, 10, 11, 12). Male Chorus. (1:0:5) A.W.S. (G-HA)** Admission by consent of director. R. Woodward
- 119 (Mu. Appl. 13, 14, 15, 16, 17, 18). Women's Chorus. (1:0:5) A.W.S. (G-HA)** Admission by consent of director. Gulbrandsen
- 122 (Mu. Appl. 19, 20, 21, 22, 23, 24). Madrigal Singers. (1:0:5) A.W.S. (G-HA)** Admission by consent of director. Halliday
- 125 (Mu. Appl. 25, 26, 27, 28, 29, 30). A Cappella Choir. (1:0:5) A.W.S. (G-HA)** Admission by consent of director. Gulbrandsen
- 128 (Mu. Appl. 31, 32, 33, 34, 35, 36). Opera Workshop. (1:0:5) A.W.S. (G-HA)** Admission by consent of director. Earl, Curtis

- 131 (New). Oratorio Choir. (1:0:2) A.W.S.** Woodward
One two-hour rehearsal each week. Required of all members of University Chorale without credit and open to any student or faculty member of the University without credit. Admission by consent of director. Recommended for all members of Male Chorus, Women's Chorus, Madrigal Singers, A Cappella Choir, and Opera Workshop, one hour credit. Performs one or more oratorios each year, sings at certain devotional assemblies, General Conference, and baccalaureate and commencement exercises.
- 135 (Mu. Appl. 43, 44, 45, 46, 47, 48). Varsity and Marching Band. (1:0:5) A. W.S. (G-HA)** Admission by consent of director. Ballou
- 138 (Mu. Appl. 49, 50, 51, 52, 53, 54). Concert Band. (1:0:5) A.W.S. (G-HA)** Admission by consent of director. R. Laycock
- 141 (Mu. Appl. 55, 56, 57, 58, 59, 60). Chamber Orchestra. (1:0:5) A.W.S. (G-HA)** Admission by consent of director. H. Laycock
- 144 (New). Theatre Orchestra. (1:0:5) A.W.S. (G-HA)** Admission by consent of director. Earl
Credit for Theatre Orchestra is limited to a total of 6 hours.
- 147 (Mu. Appl. 67, 68, 69, 70, 71, 72). Symphony Orchestra. (1:0:5) A.W.S. (G-HA)** Admission by consent of director. Sardoni
- 150 (Mu. Appl. 73, 74, 75, 76, 77, 78). Brass, Piano, Ancient Instrument, String, Vocal, or Woodwind Ensemble. (1:0:3) A.W.S. (G-HA)** Ballou, Earl, Edlefsen, Fuerstner, Gulbrandsen, Nordgren, Sardoni, Wakefield, Weinzinger, R. Woodward
- 160-p (Mu. Appl. 79-, 80-, 81-, 82-, 83-, 84-p). Private Instruction. (2:1:0) A. W.S. (G-HA)** Ten half-hour lessons per quarter. Special fee.
Brass: trumpet, cornet, French horn, trombone, baritone, tuba. Ballou, R. Laycock, Martino
Harp: Bradley
Harpsichord: Wakefield
Organ: Keeler
Percussion: R. Laycock, Martino
Piano: Bradshaw, Brownlee, Cannon, Cundick, deJong, Fitzroy, Fuerstner, Gates, Keeler, Nelson, Wakefield
Recorder: Cannon, Wakefield
Strings: violin, viola, 'cello, string bass. Buggert, H. Laycock
Nordgren, Sardoni
Voice: Cheney, Curtis, Earl, Gulbrandsen, Halliday, Jepperson-Madsen, F. Madsen, Mathews, McAllister, Terry, Weight, Weinzinger, M. Woodward, R. Woodward
Woodwinds: flute, oboe, clarinet, bassoon, saxophone. Bos, Edlefsen, R. Laycock
- 170 (Mu. Ed. 4). Group Vocal Instruction. (1:2:0) A.W.S.** Terry, Weinzinger
Class instruction for beginners in vocal production.
- 190, 191, 192 (Mu. Th. 21, 22, 23). First Year Basic Theory. (4:5:3 ea.) A.W.S.** Students who have a deficiency in piano keyboard technique must register for Music 107 or Music 160-p (piano) simultaneously with Music 190.
Brownlee, Bradshaw, Cundick, Edlefsen, H. Laycock
Tonal harmony: part writing; melodic, rhythmic, and harmonic dictation; keyboard work; sight singing; ear training; modulation analysis; simple forms.
- 237 (Mu. Ed. 107). Music for Elementary School Teachers. (3:3:0) A.W.S.** Pre-requisite: Music 102 or equivalent. Groesbeck, Terry
Materials and procedures for developing various phases of music in the elementary school. Relationship of music to the rest of the school program.

- 263 (Mu. Appl. 85, 86, 87). Piano Accompanying.** (1:0:3) A.W.S. Staff
- 290, 291 (Mu. Th. 121, 122). Second Year Basic Theory.** (5:5:3 ea.) A.W. Pre-requisite: Music 192 or equivalent. Cundick, H. Laycock, Nordgren
Diatonic and chromatic harmony, chorale harmonization, harmonic counterpoint ear-training; keyboard harmony.

- 292 (Mu. Th. 123). Second Year Basic Theory.** (4:5:3) S. Cundick
H. Laycock, Nordgren
Form and analysis; arranging for small choral and instrumental groups; introduction to 16th century counterpoint; elementary composition; ear-training.

Upper Division Courses

- 301 (Mu. Gen. 157). Elementary Baton Technique and Hymnody.** (2:2:0) A.W.S. Staff
(G-HA;G-R)
- 302 (Mu. Gen. 161). Intermediate Baton Technique and Ward Choir Direction.** (2:2:0) A.W.S. (G-HA;G-R) R. Woodward
- 310 (Mu. Appl. 101, 102, 103, 104, 105, 106). University Chorale.** (1:0:3) A.W.S. (G-HA) Participation in Oratorio Choir required. R. Woodward
- 316 (Mu. Appl. 107, 108, 109, 110, 111, 112). Male Chorus.** (1:0:5) A.W.S. (G-HA) Admission by consent of director. R. Woodward
- 319 (Mu. Appl. 113, 114, 115, 116, 117, 118). Women's Chorus.** (1:0:5) A.W.S. (G-HA) Admission by consent of director. Gulbrandsen
- 322 (Mu. Appl. 119, 120, 121, 122, 123, 124). Madrigal Singers.** (1:0:5) A.W.S. (G-HA) Admission by consent of director. Halliday
- 325 (Mu. Appl. 125, 126, 127, 128, 129, 130). A Cappella Choir.** (1:0:5) A.W.S. (G-HA) Admission by consent of director. Gulbrandsen
- 328 (Mu. Appl. 131, 132, 133, 134, 135, 136). Opera Workshop.** (1:0:5) A.W.S. (G-HA) Admission by consent of director. Curtis, Earl
- 331 (New). Oratorio Choir.** (1:0:2) A.W.S. Woodward
One two-hour rehearsal each week. Required of all members of University Chorale without credit and open to any student or faculty member of the University without credit. Admission by consent of director. Recommended for all members of Male Chorus, Women's Chorus, Madrigal Singers, A Cappella Choir, and Opera Workshop, one hour credit. Performs one or more oratorios each year, sings at certain devotional assemblies, General Conference, and baccalaureate and commencement exercises.
- 335 (Mu. Appl. 143, 144, 145, 146, 147, 148). Varsity and Marching Band.** (1:0:5) A.W.S. (G-HA) Admission by consent of director. Ballou
- 338 (Mu. Appl. 149, 150, 151, 152, 153, 154). Concert Band.** (1:0:5) A.W.S. (G-HA) Admission by consent of director. R. Laycock
- 341 (Mu. Appl. 155, 156, 157, 158, 159, 160). Chamber Orchestra.** (1:0:5) A.W.S. (G-HA) Admission by consent of director. H. Laycock
- 344 (New). Theatre Orchestra.** (1:0:5) A.W.S. (G-HA) Admission by consent of director. Earl
Credit for Theatre Orchestra is limited to a total of 6 hours.
- 347 (Mu. Appl. 167, 168, 169, 170, 171, 172). Symphony Orchestra.** (1:0:5) A.W.S. (G-HA) Admission by consent of director. Sardoni
- 350 (Mu. Appl. 173, 174, 175, 176, 177, 178). Brass, Piano, Ancient Instrument, String, Vocal, or Woodwind Ensemble.** (1:0:3) A.W.S. (G-HA) Ballou, Earl, Edlefsen, Fuerstner, Gulbrandsen, Nordgren, Sardoni, Wakefield, Weininger, R. Woodward

- 360-p (Mu. Appl. 179-, 180-, 181-, 182-, 183-, 184-p). Private Instruction.** (2:1:0)
A.W.S. (G-HA) Ten half-hour lessons per quarter. Special fee.
(For staff see Music 160-p)
- 363, 364, 365 (Mu. Ed. 105). Vocal Workshop I.** (1:0:2 ea.) A.W.S.
R. Woodward
Voice building, designed for music education majors. Survey of solo literature.
- 366 (Mu. Ed. 106). Vocal Workshop II.** (2:0:4) A. Prerequisite: Music 365 or its equivalent.
R. Woodward
Problems of group singing, designed for music education majors. Survey of ensemble literature.
- 367 (New). Percussion Workshop.** (1:0:2) A. Prerequisite: Music 192 or its equivalent.
R. Laycock
Designed to help music education majors learn to play and to teach percussion instruments. Survey of materials.
- 368 (Mu. Ed. 110). Woodwind Workshop I.** (2:0:4) A. Prerequisite: Music 192 or its equivalent.
R. Laycock
Designed to help music education majors to play and to teach clarinet and saxophone. Survey of materials.
- 369 (Mu. Ed. 115). Woodwind Workshop II.** (2:0:4) W. Prerequisite: Music 368 or the equivalent.
Edlefsen
Designed to help music education majors learn to play and to teach flute, oboe, and bassoon. Survey of materials.
- 370 (Mu. Ed. 111). Brass Workshop I.** (2:0:4) S. Prerequisite: Music 192 or its equivalent.
Ballou
Designed to help music education majors learn to play and to teach trumpet, baritone horn, and French horn. Survey of materials.
- 371 (Mu. Ed. 116). Brass Workshop II.** (2:0:4) A. Prerequisite: Music 370 or the equivalent.
R. Laycock, Martino
Designed to help music education majors learn to play and to teach violin, bone, and tuba. Survey of materials.
- 372 (Mu. Ed. 112). String Workshop I.** (2:0:4) S. Prerequisite: Music 192 or its equivalent.
Sardoni
Designed to help music education majors learn to play and to teach violin. Survey of materials.
- 373 (Mu. Ed. 117). String Workshop II.** (2:0:4) A. Prerequisite: Music 372 or the equivalent.
Sardoni
Designed to help music education majors learn to play and to teach viola, 'cello, and string bass. Survey of materials.
- 374 (New). Choral Practicum.** (2:0:5) A. Prerequisite: Music 301, 302, 365, and 366 or the equivalent.
R. Woodward
Designed for music education majors. Experience in choral conducting and singing of typical school materials. Observation and application of rehearsal techniques.
- 375 (New). Orchestra Practicum.** (2:0:5) W. Prerequisite: Music 301, 302, 372, 373, or the equivalent.
Sardoni
Designed for music education majors. Experience in orchestra conducting and playing of typical school materials on minor instruments. Observation and application of rehearsal techniques.
- 376 (New). Band Practicum.** (2:0:5) S. Prerequisite: Music 301, 302, 368, 369, 370, 371 or the equivalent.
R. Laycock, Martino
Designed for music education majors. Experience in band conducting and playing of typical school materials on minor instruments. Observation and application of rehearsal techniques.

- 383 (Musicol. 162). **History of Sacred Music.** (2:2:0) S. (G-HA; G-R) Prerequisite: Music 192 or equivalent. Cannon, Wakefield
- 390, 391 (Mu. Th. 181, 182). **Harmony at the Keyboard.** (2:2:2 ea.) A.W. Prerequisite: Music 192 and moderately advanced keyboard technique. Keeler
Harmonization of figured and unfigured basses and other voices; cadences, sequences, transpositions, modulations, and improvisations at the keyboard.
- 463 (Mu. Appl. 185, 186, 187). **Piano Accompanying.** (1:0:3 ea.) A.W.S. Staff
- 466 (Mu. Appl. 194). **The Art of Piano Accompaniment.** (1:2:0) A. Fuerstner
- 467, 468 (Mu. Appl. 195, 196). **Organ Problems.** (3:3:0 ea.) A.W. Prerequisite: Advanced standing as an organ student. Admission by consent of instructor. Keeler
Registration, accompaniment playing, other related problems.
- 484, 485 (Musicol. 184, 185). **History of Secular Music.** (3:3:0 ea.) A.W. (G-HA) Prerequisite: Music 192. Cannon, Wakefield

Advanced Undergraduate or Graduate Courses

- 563, 564 (Mu. Appl. 191, 192). **Piano Repertoire.** (1:2:0 ea.) W.S. Prerequisite: Advanced standing as a pianist. Fuerstner
- 565 (Mu. Ed. 127). **Piano Pedagogy.** (3:3:0) W. Prerequisite: Advanced standing as a pianist. Keeler
Methods, materials, and problems in teaching piano.
- 566, 567 (Mu. Appl. 188, 189). **Vocal Repertoire.** (1:2:0 ea) W.S. Prerequisite: Advanced standing as a singer. Weininger
- 568 (Mu. Ed. 218). **Vocal Pedagogy.** (3:3:0) W. Prerequisite: Advanced standing as a singer. Gulbrandsen
Methods, materials, and problems in teaching voice.
- 595, 596, 597 (Mu. Th. 271, 272, 273). **Composition.** (3:3:0) ea.) A.W.S. Prerequisite: Music 292 or equivalent. Fuerstner

MUSIC EDUCATION

- 377 (Mu. Ed. 120). **Basic Classroom Procedures.** (4:4:3) S. Prerequisite: Educational Research and Services 305. Martino
For course description and fees see Education: Instruction 377.
- 478 (Mu. Ed. 138). **Unit Planning and Teaching.** (4:3:5) A. Prerequisite: Music 377. Martino
For course description and fees see Education: Instruction 478.
- 479 (Mu. Ed. 139). **Secondary Student Teaching.** (7:1:20) A.W.S. Prerequisites: Music 478 and completion of two-thirds of courses required for the major. Martino
For course description and fees see Education: Instruction 479.

Graduate Courses

- 601 (Mu. Ed. 201). **Music in the Elementary School.** (3:3:0) A. Prerequisite: Music 237 and the equivalent of an elementary education teaching minor in music. Groesbeck
- 602 (Mu. Ed. 222). **Music Education Supervision.** (3:3:0) W. Prerequisite: Music 237 and the equivalent of an elementary education teaching minor in music. Groesbeck
- 605 (Mu. Ed. New). **Influence of Music on Behavior.** (3:3:0) A. Martino
Required of all graduate students majoring in music education.

- 606 (Mu. Ed. New). **Functional Music.** (3:3:0) W. Martino
Required of all graduate students majoring in music education.
- 610 (Mu. Ed. 241). **Music Arranging for Small Groups.** (3:3:0) S. Prerequisite:
Music 292 or equivalent. R. Laycock
May be counted either as music education or music theory.
- 612 (Mu. Ed. New). **Music Education in Society.** (3:3:0) S. Martino
Required of all graduate students majoring in music education.
- 613 (Mu. Ed. New). **Music Education Management.** (3:3:0) A. Martino
Required of all graduate students majoring in music education.
- 615 (Mu. Ed. New). **Vocal Methods, Materials, and Resources.** (3:3:0) S. Pre-
requisite: Music Education 479 or equivalent. Woodward
- 616 (Mu. Ed. New). **Instrumental Methods, Materials, and Resources.** (3:3:0)
S. Prerequisite: Music Education 479 or equivalent. H. Laycock
- 620 (Mu. Ed. 271). **Advanced Conducting.** (3:3:2) W. Prerequisite: Music 374,
375, 376, or equivalent. R. Laycock
- 625 (Mu. Ed. 281). **Summer Music Clinic.** (3:4:4 for two weeks during Clinic).
Su. Sardoni, Staff
May be counted either as music education or applied music.
- 635 (Musicol. 201). **Musical Research Techniques.** (2:2:0) A. Earl
Required of all candidates who write a thesis or dissertation.
- 637 *(Musicol. 211). **History and Literature of Music Through the Renaissance.**
(5:5:0) A. Prerequisite: Music 485 or equivalent. Wilkes
- 638 *(Musicol. 212). **History and Literature of Music in the Baroque and Clas-
sical Periods.** (5:5:0) W. Prerequisite: Music 485 or equivalent. Wilkes
- 639 (*Musicol. 213). **History and Literature of Music in the Romantic and Mod-
ern Periods.** (5:5:0) S. Prerequisite: Music 485 or equivalent. Wilkes
*Music 637, 638, 639 constitute a core-course in musicology and are required
for a graduate degree with a major or minor in musicology.
- 640, 641, 642 (Musicol. 221). **Symphony Music.** (2:2:0 ea.) A.W.S. Prerequisite:
Music 485 or equivalent. Wilkes
- 643, 644, 645 (Musicol. 222). **Chamber Music.** (2:2:0 ea.) A.W.S. Prerequisite:
Music 485 or equivalent. Not given in 1958-59.
- 646, 647, 648 (Musicol. 223). **Operatic Music.** (2:2:0 ea.) A.W.S. Prerequisite:
Music 485 or equivalent. Earl
- 649, 650, 651 (Musicol. 224). **Choral Music.** (2:2:0 ea.) A.W.S. Prerequisite:
Music 485 or equivalent. Not given in 1958-59. Staff
- 652 (New). **The History of Musical Notation.** (2:2:0) W. Prerequisite: Music 485
or equivalent. Not given in 1958-59. Staff
- 653 (New). **The History of Musical Instruments.** (2:2:0) W. Prerequisite: Music
495 or equivalent. Wakefield
- 656 (New). **Hymnology.** (2:2:0) A. Prerequisite: Music 485 or equivalent. Not
given in 1958-59. Staff
- 657 (New). **Music in America.** (3:3:0) A. Prerequisite: Music 485 or equivalent.
Wilkes
- 660-p (Mu. Appl. 282-, 283-, 284-p). **Private Instruction.** (2:1:0 ea.) A.W.S. Ten
lessons per quarter. Special fee.
Brass: trumpet, cornet, French horn, trombone, baritone, tuba.
Ballou, R. Laycock, Martino
Harp: Bradley

Harpsichord:	Wakefield
Organ:	Keeler
Percussion:	R. Laycock, Martino
Piano:	Bradshaw, Brownlee, Cannon, Cundick, de Jong, Fuerstner, Gates, Keeler, Wakefield
Recorder:	Cannon, Wakefield
Strings: violin, viola, 'cello, string bass.	H. Laycock, Nordgren, Sardoni
Voice: Curtis, Earl, Gulbrandsen, Halliday, Weight, Weinzinger, Woodward	
Woodwinds: flute, oboe, clarinet, saxophone, bassoon.	Edlefsen, R. Laycock

- 663 (Mu. Appl. 285). Solo Recital.** (3:0:6-10) A.W.S. Staff
Required of all students minoring in applied music.
- 670, 671, 672 (Mu. Th. 211, 212, 213). Counterpoint.** (3:3:0) A.W.S. Prerequisite: Music 292 or equivalent. Cundick, Gates
- 675 (Mu. Th. 221). Materials of Modern Music.** (3:3:0) A. Prerequisite: Music 292 or equivalent. Bradshaw, Gates
- 676, 677 (Mu. Th. 222, 223). Form and Analysis.** (3:3:0 ea.) W.S. Prerequisite: Music 292 or equivalent. Bradshaw, Gates
- 680, 681, 682 (Mu. Th. 231, 232, 233). Instrumentation and Orchestration.** (3:3:0 ea.) A.W.S. Prerequisite: Music 292 or equivalent. Cundick, Gates
- 685 (Mu. Th. 241). History of Music Theory.** (3:3:0) A. Prerequisite: Music 292 or equivalent. May be counted either as music theory or musicology. Nordgren
- 686 (Mu. Th. 251). Pedagogy of Music Theory.** (3:3:0) W. Prerequisite: Music 292 or equivalent. May be counted either as music theory or music education. Nordgren
- 687, 688, 689 (Mu. Th. 274, 275, 276). Composition.** (3:3:0 ea.) A.W.S. Prerequisite: Music 292 or equivalent. Fuerstner, Gates
- 692 (Mu. Ed. 294). Seminar in Music Education.** (2:2:0) W. Martino
Required of all graduate students majoring in music education.
- 693, 694 (Musicol. 294). Seminar in Musicology.** (1:1:0 ea.) W.S. Prerequisite: Music 485 and 635 or equivalent. Cannon, Earl, Wilkes
Required of all graduate students majoring in musicology.
- 695 (Mu. Ed. 295). Special Readings in Music Education.** (2:1:5) A.W.S. Martino
- 698 (Mu. Th. 311). Composition for Master's Degree.** (Arr.) Staff
Candidates for the master's degree are required to show ability to compose before work is started on the composition submitted in partial fulfillment of requirements for the master's degree.
- 699 (Mu. Ed. 300, Musicol. 300, Mu. Th. 300). Thesis for Master's Degree.** (Arr.) A.W.S. Staff
Candidates for the master's degree are required to show competence in writing and research before work is started on the thesis.
- 737, 738, 739 (New). The Age of Palestrina.** (3:3:0 ea.) A.W.S. Prerequisite: Music 637, 638, 639 or equivalent. Not given in 1958-59. Staff
- 740, 741, 742 (New). The Age of Bach.** (3:3:0 ea.) A.W.S. Prerequisite: Music 637, 638, 639 or equivalent. Wakefield
- 743, 744, 745 (New). Mozart through Beethoven.** (3:3:0 ea.) A.W.S. Prerequisite: Music 637, 638, 639, or equivalent. Not given in 1958-59. Staff
- 746, 747, 748 (New). Schubert through Brahms.** (3:3:0 ea.) A.W.S. Not given in 1958-59. Prerequisite: Music 637, 638, 639 or equivalent. Staff

requisite: Music 637, 638, 639 or equivalent.

Wilkes

787, 788, 789 (New). Advanced Composition. (3:3:0 ea.) A.W.S. Prerequisite: Music 687, 688, 689 or equivalent. Fuerstner, Gates

799 (New). Dissertation for the Doctor of Philosophy Degree. (Arr.) Staff

Candidates for the doctor of philosophy degree are required to show competence in writing and research before work is started on the dissertation.

These courses also count in Music:

Art 501. Aesthetics. (3:3:0)

Humanities 459. Lyric Theatre. (3:3:0)

Nursing

Associate Professors: Chapman (director, 2240 SFLC), Jenny.

Assistant Professors: Bloom, Babcock, Gaty, Jahraus, Kohler, Schlinder.

Instructors: Allred, Alward, C. Anderson, Harris, McBride, Oniki, Parsons, Potter, Smiley, Stevenson, Weston, Wilson.

Requirements for a Major and Minor

The following program includes the requirements for a combined major and minor in nursing.

Freshman Year				211, 212, 213, 304..			
	A	W	S	218, 220, 314..	2	4	5 6
English 111, 112, 113	3	3	3			2	3 5
Religion	2	2	2				
Physical education	1	1	1				
Chemistry 101, 102, 103	5	4	3				
Psychology 111	5						
Sociology 111		5					
Zoology 109			5				
Food and Nutrition 115			3				
Total Hours	16	15	17				
Sophomore Year				211, 212, 213, 304..			
	A	W	S Su	218, 220, 314..	2	4	5 6
History 170		5					
Physics 102		3					
Religion			2 2				
H.D.F.R. 210	3						
H.D.F.R. 211	1						
Bacteriology 121	4						
Zoology 261	4						
Nurs. 201, 202, 203, 320..	3	3	6 2				
Total Hours	16	15	17				
Junior Year				211, 212, 213, 304..			
	A	W	S Su	218, 220, 314..	2	4	5 6
Humanities	3	3	3				
Religion		2	2 2				
Sociology 400	3						
Nurs. 348, 380, 421, 352..	4	2	6 4				
340, 351, 431, 362..	4	4	5 5				
361, 429..	5	4					
Total Hours	14	16	20 11				
Senior Year				211, 212, 213, 304..			
	A	W	S	218, 220, 314..	2	4	5 6
Humanities			6				
Religion		2	2 2				
Nursing 405, 477, 470.....	6	4	2				
415, 475, 480.....	5	3	2				
485, 488.....		5	5				
Total Hours	13	14	17				

I. For Non-Nursing Majors

Lower Division Course

- 288 (7). **Family Health and Home Nursing.** (2:1.3) A.W.S. Staff
 Essential knowledge and attitudes about healthful family living. Skills in giving home nursing care to the sick or injured. Essentials of maternal health and child care.

II. For Majors in Nursing

Lower Division Courses

- 201 (5). **Fundamentals of Nursing.** (3:3:0) A. Babcock
 Introduction to fundamental needs of an individual in health and illness, community resources to meet these needs, and the nurse's role in relation to these needs. Theory and principles relating to basic nursing skills and techniques in patient care.
- 202 (9). **Fundamentals.** (3:3:0) W. Prerequisite: Nursing 201. Babcock
 Continuation of theory of basic nursing skills and techniques involved in comprehensive nursing care.
- 203 (101). **Introduction to Medical-Surgical Nursing.** (6:6:0) S. Prerequisites: Nursing 202, 218. Staff

Study of medical-surgical nursing from the standpoint of symptoms which cause the individual to seek medical-surgical care. Includes beginning study of disease conditions, diet therapy and pharmacology.

- 211 (6). **Fundamentals Laboratory.** (2:0:6) A. Concurrent registration in Nursing 201. Babcock, Staff
Introductory clinical course to enable the student to develop competency in fundamental nursing skills and techniques.
- 212 (10). **Fundamentals Laboratory.** (4:0:12) W. Concurrent registration in Nursing 202. Babcock, Staff
Continuation of clinical course in more complex fundamental nursing skills and techniques.
- 213 (102). **Introduction to Medical-Surgical Nursing Laboratory.** (5:0:25) S. Concurrent registration in Nursing 203. Staff
Experience in nursing care of patients with symptoms and disease conditions studied in Nursing 203; emphasis on the responses of the patient, his family, and the nurse. Continued application of basic nursing skills and understandings essential in meeting physical, emotional, and social needs of the patient.
- 218 (15). **Pharmacy and Pharmacology.** (2:1:2) W. Credit or concurrent registration in Nursing 212. Staff
Drugs, actions, dosages, administration, and mathematics.
- 220 (103). **Practical Aspects of Medical-Surgical Nursing.** (3:3:0) S. Staff
Introduction to the types and scope of health problems, social aspects of illness, accident prevention, and basic knowledges of medical science.

Upper Division Courses

- 304 (111). **Intermediate Medical-Surgical Nursing.** (6:6:0) Su. Prerequisites: Nursing 203, 220. Gaty
Continuation of medical-surgical nursing, organized around problems of patients with impairment or loss of essential body functions: digestive, excretory, reproductive, respiratory, and circulatory.
- 314 (112). **Intermediate Medical-Surgical Nursing Laboratory.** (5:0:25) Andersen, Oniki, Weston
Experience in nursing care related to and correlated with Nursing 304.
- 320 (105). **Eye, Ear, Nose and Throat Nursing.** (2:2:0) Su. Staff
Study of eye, ear, nose and throat conditions and development of skills essential to the care of patients with these conditions.
- 340 (114). **Orthopedic Nursing.** (4:2:20) A.W.Su. Five-week block. Staff
Nursing care of patients requiring correction of deformities of diseases and defects of the musculo-skeletal system. Includes application of learned principles to care of children with orthopedic defects.
- 348 (120). **Operating Room Nursing.** (4:2:20) A.W.Su. Five-week block. Prerequisites: Nursing 203 and 213. Schindler
Functions of the nurse in the operating room with emphasis on techniques and the understanding and application of the principles of asepsis.
- 351 (19). **Maternal and Child Care.** (4:4:0) A.W.Su. Prerequisites: Nursing 203, 240. Kohler
Study of the nursing responsibilities for the care of mothers during pregnancy, labor and delivery and the puerperium; care of newborn infants.
- 352 (23). **Nursing Care of Children.** (4:4:0) W.S.Su. Prerequisites: Nursing 203, 340. Potter, Wilson
Study of the child from infancy through early adolescence as related to growth and development, and changes in behavior patterns which are in-

dicative of illness. Study of children's diseases, related child care, and nursing skill required in special therapies.

- 361 (20). Maternal and Child Care Laboratory.** (5:0:25) A.W.S. Concurrent registration in Nursing 351. Kohler, Alward
Experience in the care of obstetric patients in the physicians' offices, the hospital maternity divisions including labor and delivery suite and post partum floors; care of infants in nurseries for premature and newborn babies.
- 362 (24). Nursing Care of Children Laboratory.** (5:0:25) W.S.Su. Concurrent registration in Nursing 352. Potter, Wilson
Experience in the care of the ill child, including physical, occupational, and play therapy.
- 380 (25). Trends in Nursing.** (2:2:0) A. Bloom
Study of relationships, origin, and development of nursing to present patterns of nursing.
- 405 (121). Advanced Medical-Surgical Nursing.** (4:4:0) A. Prerequisite: Nursing 302. Gaty
Continuation of medical-surgical nursing, with emphasis on advanced understanding and skills in meeting complex nursing problems.
- 409 (149). Senior Seminar in Advanced Clinical Nursing.** (3:3:0) W.S. Gaty, Staff
Problem solving applied to selected cases requiring skilled nursing techniques and integration of all aspects of total nursing.
- 415 (122). Advanced Medical-Surgical Nursing Laboratory.** (4:0:24) A. Five-week block. Anderson, Stevenson, Weston
Experience in nursing care related to and correlated with Nursing 405.
- 419 (150). Advanced Nursing Laboratory.** (5:0:15) W.S. Concurrent registration in Nursing 409. Gaty, Staff
Nursing care of complicated neurological and cardiac conditions, blood dyscrasias, skin and allergy, and emergency situations. Experience related to and correlated with Nursing 409 and 470.
- 421 (141). Psychiatric Nursing and Mental Health.** (6:6:0) W.S. Jahraus, Bloom
Basic concepts in prevention, diagnosis, and treatment of mental illness, and implications for nursing. Development of appreciation of the functions of the psychiatric team.
- 429 (127) Comprehensive Nursing of the Aging Population.** (1:1:0) W.S. Jahraus
Study of the normal behavior of the aged; physical, emotional, and social needs and how they can be met; specific application to the ill person. Laboratory experience integrated with concurrent clinical experience.
- 431 (142). Psychiatric and Mental Health Nursing Laboratory.** (5:0:25) W.S. Concurrent registration in Nursing 421. Bloom, Jahraus
Experience in nursing care of the acute and convalescent mentally ill. Observation of selected patients receiving intensive analytic and somatic therapy.
- 449 (145). Communicable Diseases.** (3:4:6) W.S. Five-week block. Anderson
Study of acute and long-term communicable diseases, prevention and treatment with implications for nursing care. Laboratory practice of medical aseptic techniques, and observation and care of tuberculosis patients.
- 459 (123). Advanced Maternal and Child Care.** (2:4:0) W.S. Five-week block. Prerequisites: Nursing 348, 405. Potter, Kohler

Study of nursing care of patients with obstetrical complications; care of premature infants and children with acute and terminal diseases.

- 469 (124). **Advanced Maternal and Child Care Laboratory.** (3:0:9) W.S. Five-week block. Concurrent registration in Nursing 459. Potter, Kohler
Experience in nursing care related to and correlated with Nursing 459.
- 470 (143). **Management.** (2:2:0) W.S. Schindler
Principles of organization and their application in the nursing situation. Activities of the nurse as a leader of the nursing team and responsibilities of the head nurse.
- 475 (125). **Principles of Public Health Nursing.** (3:3:0) A.W.S. Concurrent registration in Nursing 485. Allred, Jenny
Meaning and functions of public health nursing; application of principles of comprehensive nursing in the home or community setting.
- 477 (117). **Public Health Sciences.** (4:4:0) A.W.S. Concurrent registration in Nursing 485. Jenny, Staff
Meaning and scope of public health, public health organization and programs dealing with epidemiology, statistics, environmental control, maternal-child health, school health, chronic diseases, and geriatrics.
- 485 (136). **Public Health Nursing Laboratory.** (5:0:30) A.W.S. Concurrent registration in Nursing 475, 477. Allred, Jenny
Experience in a public health nursing agency in giving comprehensive nursing care to families and in working with allied professional workers and community agencies.
- 488 (152). **Comprehensive Nursing.** (5:0:25) Not given this year. Staff
- 490 (151). **Senior Seminar.** (2:2:0) W.S. Chapman
Opportunities and responsibilities inherent in the profession of nursing; emphasis on organizations, legislative controls, and fields of nursing. Survey of problems confronting the graduate professional nurse.

Nutrition

(See courses in Food and Nutrition.)

Personnel and Guidance

(See courses in Educational Research and Services.)

Philosophy

(See Division of Religion.)

Photography

(See Physics 177; Art 447, 448; Education: Instruction 307; Journalism 315, 316, 317, 318.)

Physical Education

Professors: C. J. Hart (chairman, men, 222 SFH), Holbrook (chairman, women, 320 WG), Hartvigsen, I. Heaton, E. R. Kimball.

Associate Professors: Kopp, Watts.

Assistant Professors: Barney, F. W. Dixon, Geddes, Robison, Soffe, A. Heaton.

Instructors: Bangerter, Bunker, Calderwood, Cowan, Crowton, Davis, O. Dixon, Glover, W. J. Hafen, Jacobson, M. B. Jensen, C. R. Kimball, Leake, Richardson, Stevens, Tolbert, Van Noy, Wallace, Witbeck.

Each student is required to complete successfully one lower division physical education activity course during each quarter of his freshman year. Transfer students must have the equivalent or take the courses before graduation. Exceptions: (1) Students who are majoring in and who complete the course in engineering science together with requirements for an air science commission are not subject to the above requirement. (2) Freshman air science students need take only two of the usual three required quarters of physical education. Withdrawal from the air science program before the completion of six credit hours imposes the full physical education requirement.

A variety of activities is available for selection. A year's work in physical education activity will provide the student with an opportunity for organic development, neuromuscular skill, social contact in game and team situations, and other carry-over values.

Extra-curricular activities are promoted for student participation: games, sports, hikes, dancing, and intramural athletics. The department urges all students to participate regularly in some form of physical activity.

Students using the towel service are required to make a 75-cent deposit by purchasing a towel check. This check is exchangeable for towel service during school hours and is redeemable at any time.

A thorough physical examination is required of each freshman student upon entering the institution. Any student desiring exemption from physical education for medical reasons must obtain an excuse from the university physician. Written statements from the local doctor must be approved by the university physician.

Students registered for physical education activity courses are required to provide themselves with the official uniform, which may be purchased at the university book store. They also are required to provide themselves with an approved combination padlock for use on basket lockers.

SUBJECT MATTER CLASSIFICATION

Lower Division Activity Courses

Preparatory-Remedial	1 - 99
Unclassified	101 - 109
Combatives	110 - 119
Individual Sports	120 - 139
Team Sports	140 - 159
Aquatics	160 - 169
Gymnastics	170 - 179
Rhythmics	180 - 199

Professional Courses

Type of Course	Lower Division	Upper Division	Advanced Undergrad. or Graduate	Graduate Courses
ADMINISTRATION	201-219	301-319 401-419	501-519	601-619 701-719
PHILOSOPHY AND PRINCIPLES	220-239	320-339 420-439	520-539	620-639 720-739
PHYSIOLOGICAL	240-259	340-359 440-459	540-559	640-659 740-759
EVALUATION	260-260	360-369 460-469	560-569	660-669 760-769
TEACHING METHODS	270-289	370-389 470-489	570-589	670-689 770-789
SEMINAR READINGS THESIS		390-399 490-499	590-599	690-700 790-800

Major Requirements

Physical Education — Men

Physical Education 180, 181, 182, 221, 222, 223, 224, 225, 226, 227, 228, 330, 341, 344, 371, 372, 373, 374, 413, 446, 464 and at least two hours from 206, 207, 314, 511, 542, 543. Substitution for any of the above courses allowed only upon consultation and approval of the department chairman.

Physical Education — Women

Physical Education 160, 180, 181, 182, 183, 187, 188, 189, 241, 242, 243, 244, 245, 246, 330, 341, 344, 413, 446, 464 and at least five hours from 207, 280, 314, 375, 376, 542, Health 326.

Physical Education (With Dance Emphasis)

Physical Education 180, 181, 182, 183, 187, 188, 189, 241 or 244, 242, 246, 280, 281, 282, 283, 284, 285, 287, 288, 289, 330, 341, 344, 380, 384, 387, 388, 389, 484, 485, 487, 488, 489.

Dance Major (Non-teaching)

Physical Education 180, 181, 182, 183, 187, 188, 189, 282, 283, 284, 285, 287, 288, 289, 380, 381, 382, 384, 387, 388, 389, 484, 485, 487, 488, 489.

Pre-Physical Therapy

Students majoring in pre-physical therapy will take the following courses: Physical Education 181, 221, 222, 223, 224, 341, 344, 375, 413, 446, 464, 543; Foods 115; Bacteriology 121; Health 130; History 170; Speech 121; Zoology 105, 164, 365; Psychology 111, 590; Physics 111, 112; Sociology 111 or 112; Mathematics 101 or 111, 112. They will also take three quarters of chemistry with labs.

Minor Requirements

Physical Education — Men

Physical Education 180 or 181, 330, 341, 413; 9 hours from the following courses: 371, 372, 373, 374; and 5 hours selected from 221, 222, 223, 224, 225, 226, 227, 228.

Physical Education — Women

Physical Education 180, 181, 182, 183, 187, 188, 189, 330, 341, 413 and any four from 241, 242, 243, 244, 245, 246.

Dance Minor

21 hours minimum, to include Physical Education 180, 181, 182, 183, 187, 188, 189, 282, 283, 284, 285, 287, 288, 289, 380, 484, 485.

The departments reserve the right to recommend a substitute for any of the above required courses.

Suggested Sequence of Courses — Men

Freshman Year		Junior Year	
	Hours		Hours.
English 111, 112, 113	9	English (literature)	0-4
Religion	6	Religion (sug. Ch. Adm. 377, 387, 388)	6
Phys. Ed. 221, 222, 223, 224	4	Phys. Ed. 371, 372, 373, 374	12
Bact. 121 or Zoo. 105	4 or 5	Phys. Ed. 341, 344, 182	7
*Chemistry 100	3	E.R.S. 305	6
Sociology 111	5	Phys. Ed. 377, 478	8
History 170	5	Health 362	3
Health 130	2	Humanities	3
Humanities	3-5	Minor	3-5
Minor subject area	3-5	Total	48-54
Total	44-49		
Sophomore Year		Senior Year	
	Hours		Hours
English (literature)	2-6	Religion	6
Religion	6	Phys. Educ. 479	7
Phys. Educ. 225, 226, 227, 228 ..	4	Phys. Educ. 413, 446, 464	11
Phys. Educ. 180, 181, 330	5	Ed. Adm. 310, Ed. Phil. 415, and Ed. Inst. 450	9
Zoology 164	5	Phys. Educ. Electives	2
Foods 115	3	Minor	7-13
*Physics 101	3	Total	42-48
*Phys. Sci. (Any G.E. Course) ..	3	*Physical Science 101, 102, 103 will substitute for Chemistry 100, Physics 101, and any other physical science.	
Psychology 111	5		
Health 121	2		
Humanities	3		
Minor	5-7		
Total	44-52		

Suggested Sequence of Study — Women

Freshman Year				Sophomore Year			
	A	W	S		A	W	S
Religion	2	2	2	Religion	2	2	2
English (composition)	3	3	3	Phys. Ed. 244, 245, 246	2	2	2
Phys. Ed. 241, 242, 243	2	2	2	Phys. Ed. 181, 182, 183	1	1	1
Phys. Ed. 187, 188, 189	1	1	1	Phys. Ed. 180, 160	1	1	1
Chemistry (PS)	3			Zoology 105, 164	5	5	
Social science	5			Health Ed. 362			3
Health 130		2		Psychology 111	5		
Physics		3		Humanities		3	
Humanities		3		English (literature)			4
Physical science			3	Minor		2	
Electives			2	Electives (P.E.)	1		2
				Elective			2
Total Hours	16	16	13	Total Hours	16	16	17

Junior Year

	A	W	S
Religion	2	2	2
Phys. Ed. 330, 341, 344	3	3	3
E.R.S. 305	6		
Phys. Ed. 377, 478		4	4
History 170		5	
English (literature)			2
Humanities		3	
Minor	3		6
Electives (P.E.)	2		
Total Hours	16	17	17

Senior Year

	A	W	S
Religion	2	2	2
Phys. Ed. 479, 464	7		5
Phys. Ed. 413, 446	3	3	
Ed. Phil. 415		3	
Ed. Adm. 310		3	
Ed. Inst. 450			3
Minor	5	5	3
Elective			3
Total Hours	17	16	16

Pre-Physical Therapy**Suggested Sequence of Courses****Freshman Year**

	A	W	S
English composition	3	3	3
Religion	2	2	2
Physical Education 221, 222		2	
Food and Nut. 115	3		
Chemistry 105, 101, or 111	5		
Chemistry 106, 102, or 112		5	
Chemistry 107, 103, or 113			5
Air Science	2	2	
Bacteriology 121		4	
Zoology 105			5
Health 130			2
Total Hours	17	18	17

Math 101, or 111, 112	5	5
Zoology 164	4	
Zoology 365		4
History 170	5	
Total Hours	16	15

Junior Year

	A	W	S
English literature	3		
Religion	2		
Religion 308, 310		3	3
Physical Education 224, 223	2	2	
Physical Education 375			3
Physical Education 181			1
Psychology 111		5	

	A	W	S
Religious Education 512 or 511 (Elective)	3		3
Religious Education		2	
Physical Education 341	3		
Physical Education 543		3	
Physical Education 344			3
Physical Education 446		3	
Physical Education 413			3
Physical Education 464			5
Abnormal Psychology 590	3		
Physics 111, 112	5	5	
Sociology 111 or 112		5	
Speech 121			3
Total Hours	17	18	17

Lower Division Courses**ACTIVITY COURSES**

- 101 (1). **Physical Education Activities — Men. (1:0:3) A.** Bangerter
Includes games and a variety of athletic and gymnastic activities.
- 102 (2). **Physical Education Activities — Men. (1:0:3) W.** Bangerter
- 103 (3). **Physical Education Activities — Men. (1:0:3) S.** Bangerter
- 104 (48). **Recreational Sports — Women. (1:0:3 or 5 as scheduled) A.W.S.** Calderwood
Individual, dual, and small group games and sports. Selection made from activities providing opportunity for ready development of skill and recreational satisfaction.
- 110 (17). **Boxing, Beginning — Men. (1:0:3) A.W.S.** O. Dixon
- 111 (27). **Boxing, Intermediate — Men. (1:0:3) A.W.S.** Prerequisite: Physical Education 110 or equivalent. O. Dixon
- 113 (18). **Wrestling, Beginning — Men. (1:0:3) A.W.S.** Davis

- 114 (28). Wrestling, Intermediate — Men. (1:0:3) A.W.S. Prerequisite: Physical Education 113 or equivalent.** Davis
- 121 (4). Track and Field, Indoor — Men. (1:0:3) W.** Robison
- 123 (12). Badminton. (1:0:3) A.W.S.** Soffe, Calderwood
- 125 (13). Handball — Men. (1:0:3) A.W.S.** Hafen
- 126 (46). Archery. (1:0:3) A.S.** Jacobson
Individual techniques with various types of tournaments and related archery activities. Students furnish their own arrows and bow strings.
- 131 (30). Golf, Beginning. (1:0:4) A.S.** F. W. Dixon
Two double periods each week at the Provo Municipal Golf Course. Fee.
- 132 (40). Golf, Intermediate. (1:0:4) A.S. Prerequisite: Physical Education 131 or equivalent.** F. W. Dixon
Two double periods each week at the Provo Municipal Golf Course. Fee.
- 133 (31). Tennis, Beginning. (1:0:3) A.S.** F. W. Dixon
- 134 (41). Tennis, Intermediate. (1:0:3) A.S. Prerequisite: Physical Education 133 or equivalent.** F. W. Dixon
- 135 (32). Skiing, First year. (1:0:5) W.** Cowan, Jensen, Leake
First year skiing for participants of varying abilities. Sections formed and instruction given in fundamentals of climbing, touring, downhill and slalom. Fee. (Permission to withdraw with refund restricted.)
- 136 (42). Skiing, Second year. (1:0:5) W.** Cowan, Jensen, Leake
Second year skiing for participants of varying ability. Classification for instruction based upon ability. Fee. (Permission to withdraw with refund restricted.)
- 137 (44). Outdoor Experience Through Organized Hiking — Women. (1:0:5) A.S.** Jacobson
Hikes taken in the canyons and mountains of the vicinity. Progression in difficulty is arranged. Related observations are made. Fee.
- 138 (R47). Outing Activities — Women. (1:0:3) A.S.** Holbrook
Selected seasonal activities conducted which may include such activities as snowshoeing, hiking, horseback riding, canoeing, sleighing, ice skating, tracking and trailing, and nature observation. Fee. (Permission to withdraw with refund restricted.)
- 139 (45). Horseback Riding — Women. (1:0:4) A.S.** Holbrook
Individual and group instruction in riding with development in techniques and with instruction in "aids." Correct handling of horses and the development of gait taught. Progress graded from beginning phases of horseback riding. Fee. (Permission to withdraw with refund restricted.)
- 140 (10). Basketball, Beginning. (1:0:3) A.W.S.** Cowan, Crowton
- 141 (20). Basketball, Intermediate. (1:0:3) A.W. Prerequisite: Physical Education 140 or equivalent.** Cowan, Crowton
- 144 (11). Volleyball, Beginning. (1:0:3) A.W.S.** Soffe, Wallace
- 145 (New). Volleyball, Intermediate. (1:0:3) A.W.S. Prerequisite: Physical Education 144 or equivalent.** Soffe, Wallace
- 149 (33). Field Sports — Women. (1:0:3) A. Selected outdoor team sports.** Wallace
- 150 (35). Hockey — Women. (1:0:3) A.** Wallace
- 152 (36). Softball — Women. (1:0:3) A.S.** Calderwood

- 153 (20). **Basketball, Freshmen — Men.** (1:0:5) W. Watts
Limited to those qualifying for freshman basketball squad.
- 154 (37). **Football, Freshmen — Men.** (1:0:5) A. Tolbert
Limited to those qualifying for freshman football squad.
- 155 (38). **Track and Field, Freshmen — Men.** (1:0:5) S. Robison
Limited to those qualifying for freshman track and field squad.
- 156 (39). **Baseball, Freshmen — Men.** (1:0:5) S. Van Noy
Limited to those qualifying for freshman baseball squad.
- 160 (60). **Swimming, Beginning.** (1:0:3) S. Cowan
Swimming techniques for the novice to provide a foundation for skill, safety, and enjoyment of water activities. Fee. (Permission to withdraw with refund restricted.)
- 161 (61). **Swimming, Intermediate.** (1:0:3) S. Wallace
Swimming skills including strokes, diving, and synchronizing. Fee. (Permission to withdraw with refund restricted.)
- 164 (64). **Life Saving.** (1:0:3) S. Cowan
American Red Cross life saving course. Fee. (Permission to withdraw with refund restricted.)
- 165 (65). **Water Safety Instruction.** (1:0:3) S. Prerequisite: Physical Education 164 or equivalent. Cowan
American Red Cross water safety instructor's course. Fee. (Permission to withdraw with refund restricted.)
- 166 (66). **Canoeing.** (1:0:3) A.S. Prerequisite: ability to pass swimming test or the holding of an intermediate or life saving card. Cowan, Holbrook
Instruction in canoeing techniques on the many and varied waterways of Utah County. American Red Cross basic canoeing cards and canoeing instructor cards issued to qualifying students. Fee. (Permission to withdraw with refund restricted.)
- 170 (70). **Tumbling, Beginning — Women.** (1:0:3) A.W.S. Wallace
Simple tumbling events in keeping with beginner's ability taught as foundation work. Other items given to develop skill and coordination for the fun and satisfaction of the performers.
- 171 (70). **Trampoline and Tumbling, Beginning — Men.** (1:0:3) A.W.S. Andrus
- 173 (72). **Trampoline and Gymnastics, Beginning — Men.** (1:0:3) A.W.S. Staff
Basic instruction in gymnastic and free exercises; techniques in use of parallel and horizontal bars, flying rings, side horse, and trampoline.
- 174 (73). **Trampoline and Gymnastics, Intermediate — Men.** (1:0:3) A.W.S. Prerequisite: Physical Education 173 or equivalent. Staff
- 176 (New). **Activities for Fitness — Women.** (1:0:3) A.W.S. Wallace
- 177 (New). **Principles and Methods of Body Mechanics.** (1:0:3) A.W.S. Barney
Designed to develop in the student principles of good body mechanics for daily living.
- 178 (76). **Weight Training and Body Building.** (1:0:3) A.W.S. Witbeck
- 180 (80). **Social Dance.** (1:0:3) A.W.S. A. Heaton
- 181 (88). **Folk Dance.** (1:0:3) A.W.S. Holbrook, Jensen
- 182 (89). **Square Dance.** (1:0:3) A.W.S. A. Heaton, Jensen
Square and round dances of the United States and dances of the Americas.

- 183 (87). **Tap Dance.** (1:0:3) A.W.S. Jensen
Fundamental and basic tap rhythms progressing into routines for varied tempo music.
- 187 (81a). **Modern Dance Technique, Beginning.** (1:0:3) A.W.S. Staff
Progressive fundamental movement techniques, with emphasis upon rhythm, space, locomotion, and contraction and relaxation.
- 188 (81b). **Modern Dance Techniques, Intermediate.** (1:0:3) A.W.S. Staff
Progressive fundamental movement techniques with emphasis upon qualities of movement and body action in initiating "leads".
- 189 (81c). **Modern Dance Techniques, Advanced.** (1:0:3) A.W.S. Staff
Progressive fundamental movement techniques with emphasis upon the approaches of sensory stimuli and structural analysis.

PROFESSIONAL COURSES

- 206 (106). **Officiating Football — Men.** (1:1:0) W. Watts
Rules, techniques, problems, and procedures in officiating football.
- 207 (107). **Officiating Basketball.** (1:1:0) W. Cowan, Watts
Rules, techniques, problems, and procedures in officiating basketball.
221. **Sports Fundamentals for Majors — Men.** (1:0:3) A.S. Witbeck
Speedball, touch football, and weight training.
222. **Sports Fundamentals for Majors — Men.** (1:0:3) W. Bangerter
Boxing and wrestling.
223. **Sports Fundamentals for Majors — Men.** (1:0:3) A.S. Soffe
Tennis and badminton.
224. **Sports Fundamentals for Majors — Men.** (1:0:4) A.S. Witbeck
Soccer and bowling (special fee).
225. **Sports Fundamentals for Majors — Men.** (1:0:3) W. Bangerter
Gymnastics and tumbling.
226. **Sports Fundamentals for Majors — Men.** (1:0:3) W. Soffe
Volleyball, games and relays.
227. **Sports Fundamentals for Majors — Men.** (1:0:4) A.S. Soffe
Golf, handball, and squashball.
228. **Sports Fundamentals for Majors—Men.** (1:0:3) W. Witbeck
Swimming, water safety and life saving.
- 241 (51). **Skills and Teaching Techniques — Women.** (2:0:4) A. Calderwood
Soccer, speedball, and body mechanics.
- 242 (52). **Skills and Teaching Techniques — Women.** (2:0:4) W. Jensen
Marching, gymnastics, volleyball, and tumbling.
- 243 (53). **Skills and Teaching Techniques — Women.** (2:0:4) S. Calderwood
Group games and relays, outdoor games, track and field, and softball.
- 244 (54). **Skills and Teaching Techniques — Women.** (2:0:4) A. Cowan
Hockey, badminton, practice and tests in activities calling for coordination, balance, flexibility, agility, and timing.
- 245 (55). **Skills and Teaching techniques — Women.** (2:0:4) W. Cowan
Basketball, rope jumping and recreational sports.
- 246 (56). **Skills and Teaching Techniques — Women.** (2:0:4) S. Cowan
Recreational sports, archery, golf.
- 250 (New). **Methods for Ski Instruction.** (1:0:3) A. Prerequisite: Physical Education 135 and 136 or equivalent. Cowan

Instructors' course in skiing for men and women wishing to qualify as student instructors.

- 280 (R180). **Techniques of Teaching Social Dance.** (1:0:3) S. Prerequisite: Physical Education 180. Heaton
- 281 (New). **Techniques of Calling Square Dance.** (2:0:3) A. Jensen
Analysis of dance forms, their presentation for ready learning, and study and laboratory experience in square dance calling.
- 282 (180). **Specialty Dance.** (1:0:3) A.W.S. Prerequisite: Physical Education 187, 188, 189 or equivalent. Glover
- 283 (185a). **Percussion Accompaniment, Beginning.** (1:0:3) A. Glover
Percussion accompaniment based upon rhythm, form and analysis.
- 284 (185b). **Percussion Accompaniment, Intermediate.** (1:0:3) W. Glover
Percussion accompaniment supportive of dance technique.
- 285 (185c). **Percussion Accompaniment, Advanced.** (1:0:3) S. Glover
Percussion accompaniment in choreography for interpretation and expression.
- 287 (83a). **Dance Composition, Beginning.** (1:0:3) A. Prerequisite: Physical Education 187, 188, 189 or equivalent. Glover
Compositional considerations with emphasis given to fundamental locomotor movement.
- 288 (83b). **Dance Composition, Intermediate.** (1:0:3) W. Prerequisite: One year of dance technique. Glover
Compositional considerations with emphasis given to space usage, interpretations, and relationships.
- 289 (83c). **Dance Composition, Advanced.** (1:0:3) S. Prerequisite: One year of dance technique. Glover
Compositional considerations with emphasis given to the quality and the expression in movement.

Upper Division Courses

PROFESSIONAL COURSES

- 314 (134). **Administration of Intramural Sports.** (2:2:0) S. Hafen
Procedures concerning organization, administration, and supervision of the intramural program.
- 330 (130). **Principles of Physical Education.** (3:3:0) A.S. Hart, Holbrook
Philosophy and principles underlying physical education for a general comprehension and unified view.
- 341 (141). **General Kinesiology.** (3:3:0) A.W. Prerequisite: Zoology 164. Barney, F. Dixon
Anatomy of the human body with emphasis upon study of bones, joints, muscles, and their action. Athletic exercise and its effect upon the body.
- 344 (140). **Physiology of Activity.** (3:3:0) A. S. Prerequisite: Zoology 164. Barney
Processes which occur in the body during exercise. Special attention given to the effects of exercise upon circulation, respiration, and metabolism.
- 371 (101). **Football Fundamentals and Coaching.** (3:2:2) A.S. Kopp
Fundamentals of the game, methods of working out plays, systems of offense and defense, conditioning of teams, etc.
- 372 (102). **Basketball Fundamentals and Coaching.** (3:2:2) A.W. Watts
Fundamentals of offensive and defensive systems, schedule making, etc.

- 373 (103). Track and Field Fundamentals and Coaching.** (3:2:3) W.S. Robison
Techniques of track and field athletics with emphasis upon management of meets.
- 374 (104). Baseball Fundamentals and Coaching.** (3:2:3) A.S. Van Noy
Problems and duties of the baseball coach, including individual techniques and team tactics, rules and training.
- 375 (120). Physical Education for Teachers of Primary Grades.** (2:1:3) A.W.S. Staff
Analysis of fundamentals and development of skills teaching in game and rhythm activities for grades 1, 2, and 3.
- 376 (121). Physical Education for Teachers of Intermediate Grades.** (2:1:3) A.W.S. Cowan
Analysis of fundamentals and development of skills for teaching in game and rhythm activity for grades 4, 5, 6.
- 380 (189). Dance Production.** (2:2:2) A. Glover
Research in problems for dance concerts. Suggestions for costumes, choreography, and accompaniment.
- 381 (186a). Piano Improvisation for Dance, Beginning.** (1:0:3) A. Prerequisite: Fundamental skill at the keyboard or Physical Education 381, 382, 383. Glover
- 382 (186b). Piano Improvisation for Dance, Intermediate.** (1:0:3) W. Glover
- 384 (183a). Problems in Teaching Dance.** (1:0:3) A. Staff
- 385 (183b). Problems in Teaching Dance.** (1:0:3) W. Staff
- 386 (183c). Problems in Teaching Dance.** (1:0:3) S. Staff
- 387 (181a). Modern Dance, Advanced Technique.** (1:0:3) A. Staff
- 388 (181b). Modern Dance, Advanced Technique.** (1:0:3) W. Staff
- 389 (181c). Modern Dance.** (1:0:3) S. Staff
- 413 (133). Administration of Physical Education.** (3:3:0) A.S. Hartvigsen
Executive and administrative problems arising out of organizing and conducting health, physical education and recreation programs in schools and communities.
- 446 (146). Adaptation of Activities in Corrective Procedure.** (3:2:3) W.S. Pre-requisites: Zoology 164; Physical Education 341. Barney
Variations of posture, mechanics of balancing of forces in the body, psychology of individual gymnastics, methods of stimulating interest in posture, and selection and scope of corrective activities.
- 464 (154). Introduction to Tests in Physical Education.** (5:5:0) W.S. Hart
Background course in physical achievement tests. History of the development, together with analysis of outstanding tests in physical education and statistical procedures used in analyzing tests.
- 484 (187). Philosophy and Principles of Dance.** (2:3:1) A. Staff
- 485 (188). History of Dance.** (3:3:1) S. Staff
- 487 (184a). Concert Dance.** (1:0:3) A. Glover
Performance techniques and composition for modern dance.
- 488 (184b). Concert Dance.** (1:0:3) W. Glover
- 489 (184c). Concert Dance.** (1:0:3) S. Glover

Advanced Undergraduate or Graduate Courses

- 511 (311). **Administration of High School Athletics.** (3:3:0) A. E. R. Kimball
Educational outcomes of high school athletics—their relationship to the intramural program, the physical education program, and the school and the community as a whole.
- 542 (142). **Physical Inspection.** (2:2:0) S. Staff
Ways of recognizing abnormalities of body function by inspection and testing procedures.
- 543 (143). **Problems in Athletic Conditioning and Injuries.** (3:2:3) W. Barney Fee.
- 586 (New). **Workshop in Modern Dance.** (2:5:5) Su. Holbrook, Glover, Leath
Advanced techniques. Three week summer workshop conducted simultaneously with Physical Education 587. June 30 through July 18, 1958.
- 587 (New). **Workshop in Modern Dance.** (3:5:5) Su. Holbrook, Glover, Leath
Composition, improvisation, and accompaniment. Three week summer workshop conducted simultaneously with Physical Education 586. June 30 through July 18, 1958.

EDUCATION COURSES

- 377 (137). **Basic Classroom Procedures.** (4:4:3) A.W.S. Cowan
For course description and fees see Education: Instruction 377.
- 478 (138). **Unit Planning and Teaching.** (4:3:5) A.W.S. Holbrook
For course description and fees see Education: Instruction 478.
- 479 (139). **Secondary Student Teaching.** (7:1:20) A.W.S. Bangerter, Cowan, Holbrook, Soffe
For course description and fees see Education: Instruction 479.

Graduate Courses

- 601 (New). **Supervision in Physical Education.** (3:3:0) A. Staff
Techniques of supervision with regard to their application in improving teacher-pupil learning situation in physical education. Problems met by supervisors in elementary and secondary schools with class participation in solving them.
- 602 (230). **Seminar in Administration.** (3:3:0) W. Hartvigsen
- 603 (132). **Planning and Administration of Facilities.** (3:3:0) W. E. R. Kimball
Basic problems in planning indoor and outdoor facilities for school and community physical education, health, recreation, and athletics.
- 604 (New). **Intramural Organization and Management.** (3:3:0) S. Staff
History, present status, and objectives of the intramural movement; guiding principles related to patterns of organization, units of competition, scheduling, program of activities, record keeping, awards, facilities, financing, securing officials, and special administrative problems.
- 605 (New). **Personal and Public Relations in Physical Education, Health and Recreation.** (3:3:0) W. Hartvigsen
Personal and public relations as they relate to physical education, health and recreation. Tools and techniques for determining public reaction and methods of securing good personal and public relations.
- 621 (New). **History and Philosophy.** (5:5:0) W. Holbrook
Beliefs and practices from early and modern times. Significance and implications of these events in view of their effect upon modern educational and cultural uses.

- 641 (247). Principles and Practices of Physical Reconditioning.** (3:3:0) A. Pre-requisite: Zoology 164. Barney
- 660 (255). Tests and Measurements in Physical and Health Education.** (3:3:0) W. Prerequisites: Physical Education 464 or equivalent. Hart
- 670 (New). Teaching Progression in Individual Sports.** (2:2:0) A. Soffe, Cowan
Materials, methods and teaching progression in individual sports such as archery, badminton, bowling, golf and tennis.
- 671 (New). Teaching Progression in Team Sports — Men.** (2:2:0) S. Soffe
Materials, methods, and teaching progression in team sports such as basketball, football, soccer, softball, speedball, and volleyball.
- 672 (New). Teaching Progression in Team Sports — Women.** (2:2:0) S. Cowan
Materials, methods and teaching progression in team sports such as basketball, field hockey, soccer, softball, speedball, and volleyball.
- 673 (New). Physical Education in the Elementary School.** (3:3:0) W. Holbrook
For the teacher, the principal, and the supervisor. Emphasis upon objectives, interrelationships with the curriculum, and content and material used in accomplishing educational results.
- 674 (New). Material and Methods for Secondary Teachers — Men.** (3:3:0) A. Bangerter
Designed to give the experienced teacher materials and techniques of teaching various physical education activities. The student develops a syllabus outlining progressive steps in teaching core material in such activities as trampoline, tumbling, gymnastics, apparatus and certain selected sports.
- 675 (New). Materials and Methods for Secondary Teachers — Women.** (3:2:2) Not given this year. Cowan
Core physical education material in marching, gymnastics and tumbling, trampoline, and related activities leading toward the physical education demonstration.
- 676 (236). Curriculum Construction.** (5:5:0) S. Hart
- 684 (New). Teaching Progressions in Modern Dance, Advanced.** (2:1:2) W. Staff
Overview on integration of techniques, compositional principles, and ideas employed in developing modern dance in the secondary school curriculum.
- 692 (292). Research Methods in Physical Education.** (5:5:0) A. Hart
- 694 (294). Seminar in Readings.** (2:2:0) A.W.S. Staff
- 696 (New). Seminar in Problems.** (2:2:0) S. Staff
- 698 (301). Field Project, Master's Degree.** (2-6:2-6:0) Staff
- 699 (300). Thesis, Master's Degree.** (2-6:2-6:0) Staff

Physical Science

Lower Division Courses

- 101, 102, 103 (1, 2, 3). Concepts of Physical Science. (3:3:0 ea.) (G-PS)** Compton
 This course starts Autumn Quarter and continues through the year. All three courses must be taken to receive credit which will meet the requirements for general education in the physical sciences. Emphasis is devoted to a penetrating application of the methods of science to a relatively few basic topics rather than to a superficial survey of many.

PHYSICAL SCIENCE EDUCATION

Upper Division Courses

- 377 (New). Basic Classroom Procedures. (4:4:3) A.W. Prerequisite: E.R.S. 305.** Compton
 For course description and fees see Education: Instruction 377.
- 478 (New). Curriculum and Methods. (4:3:5) W.S. Prerequisite: Physical Science Education 377.** Compton
 For course description and fees see Education: Instruction 478.
- 479 (New). Secondary Student Teaching. (7:1:20) A.S. Prerequisite: Physical Science Education 478.** Compton
 For course description and fees see Education: Instruction 479.

Advanced Undergraduate or Graduate Courses

- 501 (New). Science for Teachers. (3:3:0) Su.** Staff
- 511 (New). Science Workshop for Teachers. (2:2:0) Su.** Staff

These courses also count in Physical Science:

Education: Instruction 493, 494. Independent Reading. (1-3:1-3:0)

Education: Instruction 670. Teaching Mathematics and Science in Secondary Schools. (3:3:0)

Physics

Professors: W. Hales (chairman, 280 ESC), E. J. Eastmond, H. Fletcher, Marshall.

Associate Professors: Gardner, R. Hales.

Assistant Professors: Compton, Hoyt, McNamara, Miller.

Instructor: Dudley.

Students who expect to study engineering or physical sciences should begin their study of physics by electing Physics 211, 212, 213. Students who expect to study medicine or major in the fields of biological science should begin their study of physics by electing Physics 111, 112, 113.

Non-science students may elect with profit Physics 101, 102, 103, 104, 127, 128, 137, 177, which may be taken without prerequisite and which are organized with the view of giving the student an appreciation of his physical environment.

Physics is one of the subjects comprising the composite major in mathematics and the physical sciences designed for prospective teachers.

Requirements for Physics Major

For entrance requirements of the College of Physical and Engineering Sciences see that section of this catalog. Students majoring in physics have the following courses prescribed: Physics 211, 212, 213, 321, 322, 323, 491, 492, 493 and fifteen or more hours of additional courses selected from the 300, 400 or 500 series in the department.

Suggested Courses for Physics Major

In order to satisfy the general education requirements and at the same time obtain sufficient work in undergraduate physics to make the pursuit of graduate work profitable, the physics major must plan his program carefully.

For the physics majors the following program is recommended for the first two years:

Freshman Year				Sophomore Year			
	A	W	S		A	W	S
Math. 231, 232, 233*	5	5	5	Math. 234, 335, 339*	5	3	3
Chemistry 111, 112, 113	5	5	5	Physics 211, 212, 213	5	5	5
English 111, 112, 113	3	3	3	Religion	2	2	2
Religion	4		2	Language or electives	5	7	7
Phys. ed.	1	1	1		—	—	—
Health 130			2				
Electives	5			Total Hours	17	17	17
	—	—	—				
Total Hours	18	19	17				

*For the mathematics courses suggested above, the student might substitute the series Mathematics 111, 112, 231 first year; 232, 233, 234 second year; and Mathematics 335, 339 third year.

During the junior and senior years, courses should include all or most of those listed in the following sample program. Students pursuing specialized or terminal courses in physics can substitute for the starred courses those more suitable to their particular program.

Junior Year							
	A	W	S	Religion	2	2	2
Physics 321, 322, 323	4	4	4	Electives	7	7	7
Physics 331, 332, 333*	3	3	3		—	—	—
Physics 371, 372, 373*	2	2	2	Total Hours	18	18	18

Senior Year				Religion	2	2	2
	A	W	S	Physics 491, 492, 493	1	1	1
Math. 541, 542, 543*	3	3	3	Electives	4	4	4
Physics 341, 342, 343	5	5	5				
Physics 351, 352, 353*	3	3	3	Total Hours	18	18	18

Lower Division Courses

Only one of the courses 101, 102, 103, 104 may be taken for credit.

- 101 (1). **Essentials of Physics.** (3:3:0) A.W.S. (G-PS) Compton
Introductory description of common experiences with physical phenomena, with emphasis on energy in its various forms and manifestations.
- 102 (2a). **Fundamentals of Physics.** (3:3:0) W. (G-PS) Dudley
Introductory treatment of basic concepts of physical phenomena, with applications in nursing techniques.
- 103 (2b). **Fundamentals of Physics.** (3:3:0) A. (G-PS) Dudley
Introductory treatment of basic concepts of physical phenomena, with application in music, speech and hearing, color and image production.
- 104 (2c). **Fundamentals of Physics.** (3:3:0) S. (G-PS) Dudley
Introductory treatment of basic concepts of physical phenomena, with household applications.
- 111 (31). **General Physics, Mechanics and Sound.** (5:5:4) A. (G-PS) Prerequisite: Mathematics 111, 112 or equivalent. Staff
A general course to satisfy the physics requirement of pre-medical and pre-dental students and students in the biological sciences.
- 112 (32). **Heat and Light.** (5:5:4) W. (G-PS) Staff
Continuation of Physics 111.
- 113 (33). **Electricity.** (5:5:4) S. Staff
Continuation of Physics 112.
- 127 (New). **Descriptive Astronomy "The Solar System."** (3:3:1) A.W.S. (G-PS). McNamara
A non-mathematical presentation of our knowledge of the solar system. Frequent use is made of the observatory and the planetarium.
- 128 (New). **Descriptive Astronomy "The Stellar System."** (3:3:1) A.W.S. (G-PS). McNamara
A non-mathematical presentation of our knowledge of the content and history of the universe. Physics 127 is not a prerequisite.
- 137 (21). **Weather and Climate.** (4:3:2) W. (G-PS) W. Hales
Study of the earth's atmosphere and problems associated with climate and weather forecasting.
- 177 (26). **Physics of Light and Photography.** (4:3:3) A.S. (G-PS) W. Hales
Study of fundamentals of light phenomena with applications to photography.
- 211 (41). **General Physics, Mechanics and Sound.** (5:5:4) A. (†G-PS) Prerequisite: Calculus concurrently. Staff
A general course to satisfy requirements in physics for physical science and engineering majors. It is a prerequisite for all the specialized courses in physics.
- 212 (42). **Heat and Light.** (5:5:4) W. (†G-PS) Staff
Continuation of Physics 211.
- 213 (43). **Electricity.** (5:5:4) S. Staff
Continuation of Physics 212.

Upper Division Courses

Prerequisites for all upper division courses in physics are calculus and Physics 211, 212, 213.

- 301 (102). History of Physics.** (3:3:0) Su. Staff
History of the beginning of physical science and applications to human welfare. Designed to meet the general education of the high school teacher and layman.
- 321, 322, 323 (121, 122, 123). Mechanics.** (4:4:0 ea.) Dudley
Fundamental principles of mechanics and their application to physical problems.
- 331 (111). Heat.** (3:3:2) A. Miller
Study of temperature, heat transfer, and thermal properties of matter.
- 332 (112). Thermodynamics.** (3:3:0) W. Miller
Study of laws of thermodynamics and their applications to numerous physical and chemical phenomena.
- 333 (113). Kinetic Theory.** (3:3:0) S. Miller
Study of molecular motions and the transfer of mass, momentum, and energy in gases, liquids, and solids.
- 337 (131). Physical Meteorology.** (3:3:2) A. Not given this year. W. Hales
Study of physical elements of the earth's atmosphere and their influence upon weather and climate.
- 338 (132). Dynamic Meteorology.** (3:3:2) W. Not given this year. W. Hales
Continuation of Physics 337, with special emphasis on thermodynamics and hydrodynamics of the atmosphere.
- 339 (133). Synoptic Meteorology.** (3:2:2) S. Not given this year. W. Hales
Continuation of Physics 338, with emphasis on weather analysis and weather forecasting by means of synoptic charts.
- 341, 342, 343 (141, 142, 143). Electricity and Magnetism.** (5:5:4 ea.) A.W.S. Marshall
Electrostatics and D.C. and A.C. circuit theory; introduction to electronics.
- 351, 352, 353 (151, 152, 153). Atomic and Nuclear Physics.** (3:3:2 ea.) W. Hales
Study of the structure of the atom as revealed by X-rays, radioactivity, spectroscopy, nuclear theory, and related subjects.
- 371, 372, 373 (157, 158, 159). Experimental Optics.** (2:2:2 ea.) A.W.S. Eastmond
Fundamental principles of geometrical and physical optics with emphasis on experiments with prisms and lenses, dispersion and spectra, interference, diffraction, and polarization.
- 377, 378, 379 (187, 188, 189). Advanced Photography.** (2:2:2 ea.) A.W.S. Prerequisites: Physics 177, 211, 212, 213, and general chemistry. W. Hales
- 394 (181). Laboratory Arts.** (2:2:0) A. Staff
Process connected with construction and use of apparatus in the physical laboratory.
- 441, 442, 443 (145, 146, 147). Electronics for Physicists.** (3:3:0 ea.) A.W.S. Staff
Prerequisite: Physics 341, 342, 343 or equivalent.
- 491, 492, 493 (195, 196, 197). Seminar.** (1:1:0 ea.) A.W.S. R. Hales
Survey of physical theories and topics in modern research. A course for seniors in which the student is aided in integrating the specialized

- 494 (183). Advanced Physical Measurements.** (1-3:0:2-6) A.W.S. Staff
Precision measurements involving special laboratory techniques and solution of some research problems. Required of all majors in physics in senior year.
- 495 (191). Readings in Modern Physics.** (1-3:1-3:0) A.W.S. Staff
Reading course designed to acquaint the student with new material which may not have been included in the regular courses.

Advanced Undergraduate or Graduate Courses

- 511, 512, 513 (205, 206, 207). Introduction to Theoretical Physics.** (3:3:0 ea.)
Su. Staff
- 527, 528, 529 (New). Introduction to Astrophysics.** (3:3:0 ea.) A.W.S. McNamara
Applications of principles of atomic spectroscopy to the study of astronomical courses. Physics of stellar atmospheres and interiors.
- 551, 552, 553 (251, 252, 253). Quantum Mechanics.** (3:3:0 ea.) A.W.S. R. Hales
- 561, 562, 563 (261, 262, 263). Fundamentals of Acoustics.** (3:3:0 ea.) A.W.S. Fletcher
- 564, 565, 566 (264, 265, 266). Acoustical Measurements.** (2:0:2 ea.) A.W.S. Fletcher

Graduate Courses

- 621 (211). Advanced Mechanics.** (3:3:0) A. Gardner
- 622 (212). Dynamics.** (3:3:0) W. Gardner
- 623 (213). Theory of Relativity.** (3:3:0) S. Gardner
- 627, 628, 629 (New). Advanced Topics in Astrophysics.** (3:3:0) A.W.S. McNamara
- 631, 632, 633 (New). Kinetic Theory and Statistical Mechanics.** (3:3:0 ea.) A. W.S. Staff
- 641, 642, 643 (241, 242, 243). Mathematical Theory of Electricity and Magnetism.** (3:3:0 ea.) Not given this year. Gardner
- 651, 652, 653 (201, 202, 203). Nuclear Physics.** (3:3:0 ea.) A.W.S. R. Hales
- 671, 672, 673 (231, 232, 233). Atomic Physics and Spectroscopy.** (3:3:2 ea.) A.W.S. Not given this year. Eastmond
- 681, 682, 683 (271, 272, 273). Modern Theory of the Solid State.** (3:3:0 ea.) A.W.S. Hoyt
- 691, 692, 693 (295, 296, 297). Seminar.** (1:1:0 ea.) A.W.S. Staff
Required of all graduate students.
- 695 (291). Readings in Modern Physics.** (1-3:1-3:0) A.W.S. Staff
- 696, 697, 698 (292, 293, 294). Classical Experiments.** (2:0:4 ea.) A.W.S. Staff
- 699 (300). Thesis for Master's Degree.** (Arr.) Staff
- 771, 772, 773 (237, 238, 239). Molecular Physics and Microwave Spectroscopy.** (3:3:0 ea.) A.W.S. Prerequisite: consent of instructor. Staff
- 791, 792, 793 (New). Seminar.** (1:1:0 ea.) A.W.S. Staff

These courses also count in Physics:

Electrical Engineering 581, 582, 583. Psycho-Acoustics. (5:5:0 ea.)

Electrical Engineering 584, 585, 586. Advanced Musical Acoustics. (2:2:0 ea.)

Electrical Engineering 587. Architectural Acoustics. (5:5:0)

Political Science

Professors: Grow (chairman, 358 McKay), Jensen (emeritus).

Associate Professors: Caldwell, Reeder.

Assistant Professors: Jones, Mabey, Riggs.

Requirements for a Major in Political Science

A major in political science requires the satisfactory completion of at least 45 hours of work in this field, distributed as follows:

Required courses: Political Science 110, 111, 112 or 115, 301, 490.

Elective courses: Twenty-five hours, including at least one course from each of the following six main areas of work.

1. Political Theory
301, 303, 306, 590, 601, 605
2. Politics
310, 320, 322, 515, 610
3. Public Administration
330, 335, 345, 532, 540, 593, 630, 635
4. Comparative Government
350, 355, 362, 556, 557, 560, 650, 651
5. International Law and Relations
362, 370, 375, 376, 562, 565, 571, 580, 581, 582, 583, 665-675
6. Public Law
391, 396, 397, 590, 593, 595, 690-696

It is recommended that the major in political science include History 120 and 121 in his basic program.

Political Science 110, 111, and 112 or 115 should be completed by the end of the sophomore year. Courses and sequences other than those required should be selected in consultation with the department chairman, who will also advise the student in the selection of his minor field.

A comprehensive examination is given to all majors in the second quarter of the senior year.

Political science is designated as a "composite major" in social science. (See College of Education.)

American History and Government Requirement

In satisfying this requirement for graduation, the major student in political science is advised to take both History 120 and 121. As a minimum he should take one of the following combinations:

- Political Science 110 and History 120.
- Political Science 110 and History 121.
- Political Science 110 and History 274.

History 170 and History 180 are not recommended for majors in political science as the means of fulfilling this graduation requirement.

Lower Division Courses

- 105 (5). Current Affairs. (2:2:0) A.W.S. (G-SS) Staff
Survey of current events with special attention to historical back-

ground and present implications in economics, sociology, politics, and international relations.

- 110 (10). **American Government.** (5:5:0) A.W.S. (G-SS) **Staff**
Origin and growth of federal constitution; constitutional rights of citizens; study of executive, legislative, and judicial departments.
- 111 (11). **State and Local Governments.** (5:5:0) A.S. (G-SS) **Staff**
Relation of states to the national government; functions and powers of states; the types of municipal government and their growth and operation.
- 112 (12). **Foreign Governments.** (5:5:0) A.W. (G-SS) **Staff**
General study of selected European, Asiatic, and Latin-American governments; their development, organization, administration, and politics.
- 115 (15). **Introduction to International Relations.** (5:5:0) W.S. (G-SS) **Staff**
Survey of basic forces, practices, and institutions with special attention to foreign policies of major powers and problem areas in international politics.

Upper Division Courses

- 300 (101). **Bibliography and Research in Political Science.** (3:3:0) A.W. **Caldwell**
Sources, materials, and methods of research in political science; government documents; national, state, international organization. Required of all majors in political science.
- 301 (104). **The Development of Political Thought.** (5:5:0) A. **Caldwell**
History of political thought. Socrates, Plato, Aristotle, Epicureans, Cynics, Stoics, Cicero. Early and medieval Christian thinkers: Machiavelli, Hobbes, and others, to Locke.
- 303 (105). **Modern Western Political Thought.** (5:5:0) W. **Caldwell**
Modern and contemporary political thought, including development and criticism of liberal, socialist, communist, fascist, and conservative doctrines.
- 306 (106). **American Political Thought.** (3:3:0) S. **Jensen**
American political ideas from the colonial period to the present, with an analysis of their influence upon development of American history and government.
- 310 (110). **Political Parties in the U.S.** (3:3:0) A. **Grow**
Organization and methods of action of political systems in the United States.
- 320 (116). **American Legislative System.** (3:3:0) S. **Grow**
Structure and organization of congressional, state, and city legislative bodies, nature of business transacted; influences acting upon such bodies, parliamentary procedure.
- 322 (120). **Contemporary Problems.** (3:3:0) A. **Staff**
Selected topics which involve the formulation of American public policy in the areas of economics, sociology, politics, and international relations.
- 330 (130). **Introduction to Public Administration.** (5:5:0) A.W. **Grow**
Organization and operation of government. Relationship of administration to other branches of government; types of control over administration; central and local government.
- 335 (133). **Municipal Government and Administration.** (3:3:0) W. **Grow**
Growth, development, and organization of cities; relationship of cities to other governments; problems and activities of modern cities

- 345 (135). Government and Business.** (3:3:0) Not offered this year. Staff
General survey of governmental activities affecting business. Political, economic and legal bases of governmental regulation and limits and difficulties in applying such regulation.
- 350 (144). Government of the Soviet Union.** (3:3:0) A. Mabey
Political heritage of Russia under the Czars; development of the U.S.S.R. and its political institutions, with reference to Marxist, Leninist, and Stalinist political ideology.
- 355 (145). English Government and Politics.** (3:3:0) S. Mabey
Development of the English Constitution; examination of growth of cabinet government; the Crown, Parliament, Civil Service; local and government administration; English judicial system.
- 362 (150). Government and Politics of East Asia.** (3:3:0) S. Hyer
Analysis of traditional Asian governmental institutions in their historical context with emphasis of the structure and dynamics of modern Far Eastern politics.
- 370 (170). International Relations.** (5:5:0) W. Riggs
International relations in the contemporary world. Development of the modern state system, problems of international relations, and emergence of international law and government.
- 375 (179). International Law I.** (3:3:0) W. Reeder
Nature and function of international law; recognition, succession, jurisdiction, rights, and immunities of states; nationality and jurisdiction over nationals.
- 376 (180). International Law II.** (3:3:0) S. Reeder
Jurisdiction over aliens; international responsibilities; status, and immunities of diplomatic officials; treaties; legal regulation of the use of force.
- 391 (182). Introduction to Anglo-American Legal Institutions.** (4:4:0) S. Caldwell
Origins and development of common law and equity, the writ system, court systems, basic legal terms, the anatomy of a law suit.
- 396 (186). Constitutional Law of the U.S. I.** (5:5:0) A. Prerequisite: Political Science 110. Reeder
Fundamental rights and immunities.
- 490 (190). Senior Seminar.** (2:0:2) Staff
Research seminar required of all majors in political science. This course should follow Political Science 300.
- 498 (198). Directed Readings in Political Science.** (1 or 2:0:1 or 2) A.W.S. Staff
- Advanced Undergraduate or Graduate Courses**
- 515 (115). Public Opinion and Propaganda.** (3:3:0) W. Grow
Trends of public opinion and techniques which have been instrumental in shaping and ascertaining it. Propaganda techniques and analysis.
- 532 (131). Personnel Administration.** (3:3:0) A. Staff
Treatment of processes, procedures, controls, and problems of personnel administration in executive branches of federal, state and local governments.
- 540 (134). Administration of American Foreign Policy.** (3:3:0) S. Grow
Organizations administering foreign policy. Emphasis on structure and function of the State Department and foreign service; the role of Congress in foreign relations.
- 556 (146). Governments of the British Commonwealth.** (3:3:0) Not offered this year. Staff

Development of colonial and dominion status; governments of Canada, Australia, New Zealand, South Africa, with some attention to recent developments in the Far Eastern Dominions.

- 557 (148). **Government and History of Canada.** (3:3:0) W. (1959-60 and alternate years.) Staff
- 560 (149). **Governments of Latin-America.** (3:3:0) S. (1958-59 and alternate years.) Staff
Growth and political development of countries in the Latin-American area, with special reference to Argentina, Brazil, and Mexico.
- 565 (159). **International Organization.** (3:3:0) A. Riggs
History and structure of international organizations, with particular emphasis on the United Nations organization and its specialized agencies.
- 571 (175). **Development of American Foreign Policy.** (5:5:0) S. Staff
Role of the United States in international affairs from colonial times to the present.
- 580 (171). **Foundations of National Power (The Americas).** (3:3:0) A. Staff
Analysis of the Western hemisphere in terms of geography, natural resources, relations among American nations, demography, and inter-continental relations.
- 581 (172). **Foundations of National Power (Europe).** (3:3:0) W. Staff
Analysis of the European continent in terms of geography, natural resources, relations among European nations, and demography; inter-continental relations.
- 582 (173). **Foundations of National Power (Near and Middle East).** (5:5:0) S. (1957-58 and alternate years.) Staff
Analysis of the Near and Middle East from the perspective of geography, natural resources, population, politics, international relations.
- 583 (174). **Foundations of National Power (Far East and Pacific).** (3:3:0) A. Staff
(1958-59 and alternate years.)
Analysis of the Far East and Pacific Basin from the perspective of geography, natural resources, population, politics and international relations.
- 590 (181). **Jurisprudence.** (4:4:0) S. (1958-59 and alternate years.) Caldwell
Problem approach to ancient and modern legal philosophies, with special attention given the nature of justice and the relation of law and morality.
- 593 (183). **Administrative Law of the U.S.** (5:5:0) S. (1959-60 and alternate years.) Reeder
Legal setting for administrative bodies and judicial control of administrative action. Cases in administrative law read and discussed.
- 595 (185). **American Constitutional Development.** (3:3:0) W. Prerequisite: Political Science 110. Jensen
History and development of the Constitution; study of its fundamental provisions, their interpretation and application in the functioning of the American system of government.

Graduate Courses

- 601 (202). **Modern Political Philosophy.** (3:3:0) S. (1958-59 and alternate years.) Caldwell
- 605 (203). **Roots of American Democracy.** (3:3:0) W. (1959-60 and alternate years.) Caldwell
- 610 (210). **American Political Problems.** (3:3:0) A. (1959-60 and alternate years.) Grow

- 630 (230). **Comparative Public Administration.** (3:3:0) S. (1958-59 and alternate years.)
Grow
- 635 (232). **State and Municipal Administration.** (3:3:0) W. (1957-58 and alternate years.)
Staff
- 650 (240). **Democratic Governments.** (3:3:0) W. (1959-60 and alternate years.)
Riggs
- 651 (241). **Totalitarian Governments.** (3:3:0) S. (1959-60 and alternate years.)
Mabey
- 665 (269). **International Organization in the 20th Century.** (3:3:0) S. (1958-59 and alternate years.)
Riggs
- 670 (270). **International Relations in the 20th Century.** (3:3:0) W. (1959-60 and alternate years.)
Riggs
- 675 (280). **Modern International Law.** (3:3:0) S. (1958-59 and alternate years.)
Reeder
- 690 (288). **Supreme Court of the United States.** (3:3:0) A. (1959-60 and alternate years.)
Caldwell
- 696 (286). **Constitutional Law in the 20th Century.** (3:3:0) A. (1959-60 and alternate years.)
Reeder
- 698 (298). **Directed Readings in Political Science.** (1 or 2:0:1 or 2) A.W.S.
Staff
- 699 (300). **Thesis for Master's Degree.** (4 or 6:0:4 or 6) A.W.S.
Staff

These courses also count in Political Science:

Economics 575. Government Finance. (5:5:0)

Geography 584. Political Geography. (3:3:0)

Portuguese

(See courses in Languages.)

Poultry Husbandry

(See courses in Animal Husbandry.)

Pre-Dental

(See College of Biological and Agricultural Sciences.)

Pre-Legal

(See College of Humanities and Social Sciences.)

Pre-Medical

(See College of Biological and Agricultural Sciences.)

Pre-Optometry

(See College of Biological and Agricultural Sciences.)

Pre-Osteopathy

(See College of Biological and Agricultural Sciences.)

Pre-Pharmacy

(See College of Biological and Agricultural Sciences.)

Pre-Veterinary

(See College of Biological and Agricultural Sciences.)

Psychology

Professor: M. K. Allen (chairman, 1230 SFLC).

Associate Professors: Howell, C. Taylor.

Assistant Professors: Hardy, J. W. Moffitt, F. R. Wilkinson.

Instructor: Drewes.

The science of psychology has a place in the general education of everyone in his search for an understanding of himself and others. It concerns itself with such questions as How does man experience and react to the world around him? What factors and processes underlie the mental life and behavior of individuals and groups?

Psychology has specific relevance for students preparing for careers in teaching, counseling, industrial relations, social work, law, medicine, and many branches of government service. Furthermore, it enriches and clarifies for the individual many of the concepts in the other sciences in the humanities, and in the arts.

For a major in psychology, a total of 45 hours is required, including Psychology 111, 360, 365, 370, 374, 378, and one seminar. The remainder of the program must be elected from upper division courses. Courses listed as Soc.-Psych. (Social-Psychology) may be used for credit either in Psychology or Sociology, but not in both. A maximum of 10 of the 45 hours may be chosen from a selected list of courses in other departments, with the consent of the department adviser.

Students minoring in psychology are urged to contact an adviser in the department early in order to work out a program adapted to their individual needs.

Graduate work leading to a master's degree is offered, including a program in training of school psychologists, which is given in collaboration with the Department of Educational Research and Services. This year a doctoral program in clinical psychology is being introduced.

Lower Division Courses

- 101 (1). Effective Study.** (2:2:0) A.W.S. Staff
 Budgeting time, notemaking, memorizing, improvement of reading, use of library, etc. Open to lower division students only, except by consent of instructor.
- 105 (5). Psychology of Adjustment.** (3:3:0) A. Staff
 Applications of psychology to typical problems of college students in such areas as emotional, social, and vocational adjustment. Not intended for those who have taken or will take Psychology 111.
- 111 (11). General Psychology.** (5:5:0) A.W.S.Su. (G-SS) Staff
 Foundation course covering essentials of modern scientific psychology. Prerequisite for most upper division psychology classes.
- 205 (22). Applied Psychology.** (3:3:0) A.W.S. (†G-SS) Staff
 Prerequisite: Psychology 111.
 Survey of applications of psychological principles and techniques in the fields of business, industry, advertising and selling, legal procedures, medicine and education.

Upper Division Courses

- 311 (112). Advanced General Psychology.** (5:5:0) A.W. Prerequisite: Psychology 111.
Allen, Drewes
 Intensive survey of the general field with special emphasis on topics not covered in detail in Psychology 111. Intended for minors or other advanced students not planning to take Psychology 360, 365, and 378.

- 320 (120). Psychology of Childhood.** (3:3:0) A.W.S. (†G-SS) Prerequisite: Psychology 111. Howell, Taylor
Critical presentation of research on physical, mental, emotional and social development of the child and his interests, values, and motivations. Primarily for majors and minors.
- 321 (122). Psychology of Adolescence.** (3:3:0) A.W.S. (†G-SS) Prerequisite: Psychology 111. Howell, Taylor
Development and maturation during adolescence, with special attention to research methodology. Programs of sex-social adjustment, independence, vocational adjustment, emotional and social maturing in our society.
- 322 (126). Psychology of Adult Life.** (3:3:0) W. (G-SS) Prerequisite: Psychology 111. Taylor
Physiological, intellectual, personality and motivational changes associated with adulthood.
- 330 (164). Industrial Psychology.** (3.3.0) A.S. Prerequisite: Psychology 111. Hardy, Moffitt
Special application of psychology in human relations program for management. Important issues in relation to motivation, morale, safety efficiency, etc.
- 335 (165). Business Psychology.** (3:3:0) Not given this year. Prerequisite: Psychology 111. Staff
Psychological aspects of business, especially in advertising, personal selling and research techniques in these fields.
- 337 (167). Personnel Psychology.** (3:3:0) A.W.S. Prerequisite: Psychology 111. Lee
Selection, application, and interpretation of psychological tests; job analysis; personality problems of the worker.
- 338 (New). Supervised Experiences in Personnel Psychology.** (3:1:6) S. Prerequisite: Psychology 111 and 337. Lee
Individual and group projects in employment and placement, personnel interviewing, and employee morale questionnaires.
- 340 (143). Mental Hygiene.** (3:3:0) A.W.S. (G-SS) Prerequisite: Psychology 111. B. Robinson, C. Taylor, F. R. Wilkinson
Intended to yield insight into prevention and amelioration of mental and personal difficulties. Important for prospective parents, teachers, and social workers.
- 350 (145). (Soc.-Psych.) Introduction to Social Psychology.** (3:3:0) A.W.S. (†G-SS) Prerequisite: Psychology 111 or Sociology 111. Dyer, Hardy, Larsen
This course may be used for credit either in psychology or sociology, but not in both.
Nature of social influence; socialization; concepts of norm, role, status; development of beliefs and attitudes; leadership; group processes. Applications to prejudice, persuasion, social control.
- 357 (New). (Soc.-Psych.) Group Relations and Leadership.** (3:3:2) A.W.S. Hardy, Larsen, Moffitt
This course may be used for credit either in psychology or sociology, but not in both.
Designed to help the individual participate effectively in group life and assist leaders to become efficient in role performance.
- 360 (110). Cognitive Processes.** (4:4:0) A.W.S. Prerequisite: Psychology 111. M. K. Allen, F. R. Wilkinson
Core course for majors, minors and other advanced students. Theories of and function; learned and unlearned factors in perception; thinking; relationships to other psychological functions.

- 365 (111). Motivation.** (4:4:1) A.W.S. Prerequisite: Psychology 111. Hardy, Moffitt
Core course for majors, minors and other advanced students. Theories of motivation; research methods and results; bases of motivation; emotions and motivation; measuring motivation; motivation as related to learning and cognitive processes; practical implications of motivation study.
- 370 (113). Elementary Statistics.** (5:5:5) A.S. Howell
Logic and understanding of basic descriptive and inferential statistics. Problems and techniques of central tendency, variability, standard error, concepts of significance and correlation.
- 374 (115). Experimental Psychology.** (4:2:6) A.W. Prerequisite: Psychology 111, Psychology 370 or equivalent. Drewes, Wilkinson
Exploring application of experimental methods to a wide variety of psychological areas including cognition, learning, motivation and abilities.
- 378 (116). Abilities.** (4:4:0) A.S. Prerequisite: Psychology 111. Howell, Taylor
Core course for majors, minors, and other advanced students. Statistical methodology of assessing and interpreting abilities; tests of abilities and their purposes; group differences of abilities.
- 440 (130). Clinical Psychology.** (3:3:0) A. Prerequisite: Psychology 111. Robinson, Taylor
Survey of the field of clinical psychology; professional relationships; etiology of problem behavior; diagnostic techniques and remedial procedures; applications to home, school, industry, and community.
- 445 (131). Exceptional Children.** (3:3:0) W. Prerequisite: Psychology 111. Allen, Taylor
Diagnosis of exceptionality; psychological significance; gifted, mentally retarded, physically and emotionally handicapped children; treatment measures. Survey course for students interested in management of children.
- 491, 492, 493 (191, 192, 193). Psychology Seminar.** (1:2:0 ea.) A.W.S. One seminar required of psychology majors. Staff
Reports and discussions of special topics and current psychological literature.
- 495, (198). Independent Readings.** (1-3:1-3:0) A.W.S. Staff

Advanced Undergraduate or Graduate Courses

- 540 (139). Abnormal Psychology.** (3:3:0) S. Prerequisite: Psychology 111 and consent of instructor. Allen
Core course for majors, minors and other advanced students. Theories of abnormal behavior; research methods and results; bases of abnormal behavior; diagnosis and treatment of abnormal behavior.
- 550 (140). Psychology of Personality.** (4:4:0) A.S. (†G-SS) Prerequisite: Psychology 111. Moffitt
Core course for majors, minors and other advanced students. Theories of personality; research methods and results; bases of personality; diagnosis and treatment of personality disorders.
- 552 (251). (Soc.-Psych.) Personality: Culture and Society.** (3:3:0) A. This course may be used for credit either in psychology or sociology, but not in both. Staff
Study of the role of culture and society in the formation and functioning of personality.
- 555 (245). (Soc.-Psych.) Group Dynamics.** (3:3:0) W. Hardy
This course may be used for credit either in psychology or sociology, but not in both.
Research and theories in group dynamics.
- 560 (228). Psychology of Learning.** (3:3:0) W. Prerequisite: Psychology 111. Allen, Drewes
Core course for majors, minors and other advanced students. Theories of learning; research methods and results; bases of learning; diagnosis and treatment of learning disorders.
- 574 (New). Advanced Experimental Psychology.** (3:2:7) S. Prerequisite: Psychology 111, Psychology 374 or equivalent. Drewes, Wilkinson
Exploring application of experimental methods to a wide variety of psychological areas including cognition, learning, motivation and abilities.

- 580 (180). **Comparative Psychology.** (5:5:0) S. Prerequisite: Psychology 111. Wilkinson
- 585 (181). **Physiological Psychology.** (5:5:0) W. Prerequisite: Psychology 111. Drewes, Wilkinson
- 598 (299). **Independent Research.** (1-3:1-3:0) A.W.S. Staff

Graduate Courses

- 610 (118). **Systematic Psychology I: History of Psychology.** (4:4:0) A. Howell
- 611 (250). **Systematic Psychology II: Psychological Theory.** (4:4:0) W. Moffitt
- 612 (New). **Systematic Psychology III: Contemporary Problems in Psychology.** (4:4:0) S. Taylor
- 626 (235). **Mental Deficiency.** (3:3:0) S. Allen
- 627 (237). **Gifted Children.** (2:2:0) A. Allen, Taylor
- 628 (236). **Psychology of the Physically Handicapped.** (3:3:0) Not given this year. Taylor
- 640 (272). **Individual Test Practice: Infants and Children.** (5:2:6) W. Howell, Taylor
- 641 (New). **Individual Test Practice: Adolescents and Adults.** (3:1:4) S. Howell, Taylor
- 642 (New). **Special Clinical Testing.** (3:1:6) Not given this year. Howell, Taylor
- 651 (231). **Problems in Psychopathology.** (3:3:0) S. Allen, Drewes, Taylor
- 670 (213). **Advanced Statistics I.** (3:3:0) A. Howell, Moffitt
- 671 (214). **Advanced Statistics II.** (3:3:0) W. Howell, Moffitt
- 672 (New). **Advanced Statistics III.** (3:3:0) S. Not given this year. Moffitt
- 675 (New). **Experimental Psychodynamics.** (3:3:3) A. Not given this year. Staff
- 680 (230). **Introduction to Psychotherapy.** (3:3:0) W. Robinson
- 690 (New). **Seminar: Research Problems.** (1:2:0) A.W.S. Not given this year. Staff
- 695 (298). **Independent Readings.** (1-3:1-3:0) A.W.S. Staff
- 699 (300). **Thesis for Master's Degree.** (Arr.) A.W.S. Staff
- 720 (New). **Seminar: Clinical Problems of Genetic Psychology.** (2:2:0) Not given this year. Howell, Taylor
- 740 (273). **Introduction to Projective Techniques.** (3:3:0) A. Taylor
- 741 (New). **Rorschach Test Practice.** (5:2:6) W. Howell, Robinson, Taylor
- 743 (746). **Practicum: Diagnostic Testing.** (3:1:6) S. Not given this year. Staff
- 747 (New). **Internship in Clinical Testing.** (3-6:2:7-16) A.W.S. Staff
- 748 (New). **Internship in Clinical Testing.** (3-6:2:7-16) A.W.S. Staff
Continuation of Psychology 747.
- 750 (New). **Seminar: Personality.** (2:2:0) A. Not given this year. Staff
- 760 (New). **Seminar: Learning.** (2:2:0) S. Not given this year. Staff
- 780 (New). **Individual Psychotherapy: Practicum.** (4:2:2:) A. Not given this year. Staff

- 781 (New). Individual Psychotherapy: Practicum.** (4:2:2) W. Not given this year. Staff
Continuation of Psychology 780.
- 782 (New). Group Therapy: Theory and Practice.** (4:2:4) Not given this year. Staff
- 783 (741). Play Therapy: Theory and Practice.** (4:2:4) S. Taylor
- 799 (New). Dissertation.** Staff

Public Relations

(See courses in Journalism.)

Radio and Television

(See courses in Journalism and in Speech and Dramatic Arts.)

Recreation

Professors: I. Heaton (chairman, 218 SFH), Hart, Hartvigsen, Holbrook.

Assistant Professors: F. W. Dixon, A. Heaton.

Instructors: Calderwood, Hafen, Jacobson.

A student interested in recreation may complete courses for a recreation major, a minor, or a composite major. He may also take specified recreation courses to fill certain religion requirements, and he may register for recreation courses on an elective basis.

Recreation Major

A student majoring in recreation should take the following courses: Recreation 201, 387, 388, 503, 505, 537, 579; Health 121; Speech 103; Sociology 449; Ed. Inst. 324; P.E. 375 or 376; 15 hours of approved courses from the Departments of Education: Instruction, Physical Education, Art and Music and ten additional hours of approved electives. Requirements for a composite major are listed in the College of Education section of this catalog under Health, Physical Education and Recreation.

Recreation Minor

Students minoring in recreation should take the following courses: Recreation 201, 387, 537, and 16 hours of approved electives. (See department chairman for copy of complete 4-year course of study in recreation education.) Appropriate substitutions may be made with the consent of the department chairman.

Lower Division Courses

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|-----|--|-------------|
| 121 | (10). Bowling. (1:0:3) A.W.S. Fee. | F. W. Dixon |
| 123 | (67). Skills and Techniques for Outdoor Recreation. (1:0:3) S. | Staff |
| 181 | (81). South American Dances. (2:0:3) A.W.S. | A. Heaton |
| 201 | (New). Introduction to Recreation. (3:3:0) A.W.S. | I. Heaton |

Upper Division Courses

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|-----|--|-----------|
| 331 | (131). Theory of Play. (3:3:0) A. | Holbrook |
| | The theory of play and its organization. Gives consideration to history and classification of play, need for play in modern life, and play in education. | |
| 371 | (HDFR 171). Planning for Family and Neighborhood Recreation. (2:2:0) A. | Holbrook |
| | Principles and techniques in arranging for and conducting recreational activities for a family group as well as for families in neighborhood groups. | |
| 387 | (187). Planning for Social Recreation. (2:2:0) A.W.S. | Staff |
| | Principles and techniques in arranging for and conducting social recreation for family and church groups. | |
| 388 | (188). Leadership in Church Dances. (2:2:0) A.W.S. | A. Heaton |
| | Given to meet needs of community, church, and school recreation leaders. Designed particularly to give experience and training in church dance program. | |

Advanced Undergraduate or Graduate Courses.

- 503 (138). Administration of School and Community Camps. (3:3:0) S.** I. Heaton
Objectives and problems involved in establishing community and school camps. Best practices dealing with location, safety, health, and program of activity thoroughly analyzed.
- 505 (New). Administration of Community Recreation. (3:3:0) W.** I. Heaton
Problems peculiar to the organization and administration of a community recreation program including objectives, legal aspects, facilities, personnel, activities, budgeting, and public relations.
- 537 (137). Philosophy of Recreation. (3:3:0) A.W.S.** I. Heaton
Importance of education for leisure and analysis of needs of individuals for recreation in our modern complex society.
- 579 (160). Directed Leadership in Recreation. (2-6:1:6-18) A.W.S.** Staff
Supervised experience in public and private recreation programs. Register only with consent of Recreation Department chairman.

Graduate Courses

- 602 (230). Seminar in Administration. (3:3:0) W.** Hartvigsen
- 607 (New). The Conduct of Playgrounds. (3:3:0) S.** A. Heaton
- 609 (New). The Recreation Program. (3:3:0) A.** I. Heaton
- 683 (283). Workshop in Recreation Dance. (2:2:0) A.** A. Heaton
- 692 (292). Research in Recreation (5:5:0) A.** Hart
- 694 (294). Seminar in Readings. (2:2:0) A.W.S.** I. Heaton
- 699 (300). Thesis for Master's Degree. (2-6:2-5:0) A.W.S.** I. Heaton
- 700 (301). Field Projects. (2-7:2-5:0) A.W.S.** I. Heaton

These courses also count in Recreation:

- Ed. Inst. 324. Arts and Crafts for Elementary Teachers. (2:2:2)**
- English 253. Introduction to Drama. (3:3:0)**
- Health 121. First Aid. (2:2:0)**
- Ind. Arts 260. Recreational Handicrafts. (1-3:0:2-6)**
- Ind. Arts 466. Art Metal Crafts. (2:0:4)**
- Journalism 211. News Writing. (3:2:2)**
- Journalism 212. Reporting. (3:1:6)**
- Music 102. Fundamentals of Music. (3:3:0)**
- Music 301. Elementary Baton Technique and Hymnody. (2:2:0)**
- Physical Education 603. Planning and Administration of Facilities. (3:3:0)**
- Physical Education 605. Personal and Public Relations in Health, Recreation and Physical Education. (3:3:0)**
- Physics 177. Physics of Light and Photography. (4:3:3)**
- Sociology 117. Group Relationships and Principles of Leadership. (3:3:0)**
- Sociology 449. Community Organization. (3:3:0)**
- Speech 103. Group Discussion. (2:2:0)**
- Youth Leadership 373. Boy Scout Leadership. (3:3:1)**

Other courses approved by chairman of Recreation Department may be used by recreation majors and minors.

Religion

Professors: Sperry (director of graduate studies in religion, 122 S), Belnap, Done, Ellsworth, Nibley.

Associate Professors: Ludlow, R. R. Rich.

Assistant Professors: Yarn (director of undergraduate courses in religion, 222 S), Anderson, H. L. Andrus, Bankhead, Barrett, Barron, J. R. Clark, Doxey, Horsley, G. O. Larsen, Madsen, Ricks, Riddle, L. M. Rogers.

Instructors: Bennett, A. I. Bentley, Fitzgerald, Pearson, Rasmussen, Tingey, Turner.

Faculty members from other departments of the University also instruct classes in the Division of Religion.

UNDERGRADUATE STUDIES IN RELIGION

David H. Yarn, Jr., Director

General Education Requirements in the Division of Religion

Freshman and sophomore students should obtain a total of twelve hours' credit in the following areas:

Book of Mormon: Scripture 111, 112, 113

Church History 131, 132, 133

Missionary Training: L.D.S. Church Administration 141, 142, 143

New Testament: Scripture 123, 124, 125

Theology 101, 102, 103

Theology 104, 105, 106

Each of these courses carries two credit hours per quarter. It is recommended that a student follow all three courses of the sequences which are elected.

Juniors and seniors should obtain a minimum of six hours of upper division credit from the offerings of the Division of Religion which are not cross referenced from credit in other departments of the University. The remaining six hours of credit to fill the University requirement for graduation of twenty-four hours of credit in religion (or two hours per quarter for every quarter in residence up to 24 hours) may be elected either from among the courses carrying cross-reference credit or from the other offerings of the Division of Religion.

All transfer students ranking as juniors and all returned missionaries are not only permitted but expected to elect upper division courses in religion.

Archaeology

M. Wells Jakeman, Chairman

See list following graduate courses.

Bible and Modern Scripture

Eldin Ricks, Chairman

This department is divided into the following areas:

Book of Mormon: 111, 112, 113, 325, 341, 342, 343, 524.

Doctrine and Covenants: 331, 332, 333, 341, 342, 343, 414.

New Testament: 123, 124, 125, 313, 314, 315, 341, 342, 343.

Old Testament: 301, 302, 303, 304, 314, 341, 342, 343.

Pearl of Great Price: 338, 339, 341, 342, 343.

General: 344.

Lower Division Courses

- 111, 112, 113 (11, 12, 13). Introduction to the Book of Mormon and Its Teachings.** (2:2:0 ea.) A.W.S. (G-R) Staff
 Consideration of origin, content and teachings of the Book of Mormon.
- 123, 124, 125 (23, 24, 25). Introduction to the New Testament and its Teachings.** (2:2:0 ea.) A.W.S. (G-R) Staff
 The life and teachings of Jesus, the early Church and its writings, and Paul's life and teachings.

Upper Division Courses

- 301, 302, 303 (101, 102, 103). The Old Testament.** (2:2:0 ea.) A.W.S. (G-R) Rasmussen, Rogers
 Structure and religious content of the Old Testament. An attempt is made to show that Israel's leaders had a vital religious message for the world of today.
- 304 (104). The Spirit of the Old Testament.** (2:2:0) S. (G-R) Rasmussen
 Analysis of literary problems, religion, and spirit which characterize the Old Testament.
- 311 (111). Israel's Prophets.** (2:2:0) A.W.S. (G-R) Rasmussen, Rogers, Sperry
 Messages of Old Testament prophets—major and minor—are examined for the value they have and have had both in our time and in theirs.
- 313 (113). The Life of Christ.** (2:2:0) A. (G-R) Bankhead, Bentley
 Consideration of sources for the life of Christ; relationship of political, religious, and geographical environments. Analysis of the Savior's prominent teachings during the Galilean and Judean ministries.
- 314 (114). Paul the Apostle and Missionary.** (2:2:0) W. (G-R) Bankhead, Bentley
 Examination of the life and teachings of the Apostle; his missionary problems and their resolution; results of his work.
- 315 (115). An Historical Examination of the New Testament.** (2:2:0) S. (G-R) Bankhead, Bentley
 Analysis of the structure of the New Testament. Consideration of its writings and forces which produced them.
- 325 (125). The Doctrines of the Book of Mormon.** (2:2:0) A.W.S. (G-R) Bankhead, Ludlow, Turner
 Advanced course dealing with doctrines and teachings of Nephite sacred scripture. Recommended especially for students who have not had Scripture 111, 112, 113.
- 331, 332, 333 (131, 132, 133). The Doctrine and Covenants.** (2:2:0 ea.) A.W.S. (G-R) Andrus, Doxey
 Study of origin and content of the Doctrine and Covenants.
- 338 (138). The Pearl of Great Price.** (2:2:0) A.W.S. (G-R) J. R. Clark
 Preliminary study of origin and content of the Pearl of Great Price.
- 339 (139). Doctrines of the Pearl of Great Price.** (3:3:0) A.W.S. (G-R) J. R. Clark
 Advanced course dealing with doctrines and teachings of the Pearl of Great Price.
- 344 (144.) Teaching the Scriptures.** (2:2:0) A.W.S. L. Anderson
 Designed for prospective seminary teachers. Admission by permission of the instructor.

- 524 (124). **Analysis of the Book of Mormon.** (2:2:0) A.W.S. (G-R) Sperry
Critical analysis of Nephite literature.
- 590, 591, 592 (141, 142, 143). **Seminar.** (Arr.) A.W.S. Staff
For senior or other advanced students who desire to pursue specialized problems related to the Bible and modern scripture. Admission by permission of instructors.

Church History

Russell R. Rich, Chairman

Lower Division Courses

- 131, 132, 133 (31, 32, 33). **Latter-day Saint History and Doctrine.** (2:2:0 ea.) A.W.S. (G-R) Staff
Survey course in the history of the Church with progressive study of the development of its institutions, beliefs, doctrines, and religious practices in relation to the social and historical setting.

Upper Division Courses

- 301, 302, 303 (101, 102, 103). **History of the Church of Jesus Christ of Latter-day Saints.** (2:2:0 ea.) A.W.S. (G-R) Recommended for juniors or seniors who have not had 131, 132, 133. Andrus, Barrett, Barron
Horsley, Larson, Rich
Intensive study of the history of the Church from 1805 to 1847.
- 304, 305, 306 (104, 105, 106). **History of the Church of Jesus Christ of Latter-day Saints.** (2:2:0 ea.) A.W.S. (G-R) Barrett, Barron, Larson, Rich
Intensive study of the history of the Church from 1848 to the present.
- 307 (107). **Biographies of L.D.S. Leaders.** (2:2:0) A.S. (G-R) Barrett
A biographical study of significant L.D.S. Church personalities of the first half century of the restoration.
- 351 (New). **Great Figures in Christian History.** (2:2:0) S. Horsley
Biographical study of significant Christian personalities and their contributions to Christianity from Paul to Joseph Smith.
- 352 (New). **Martin Luther - Forerunner of the Restoration.** (2:2:0) S. Horsley
Study of Luther's life, theology, and influence upon Protest-Christianty, with special emphasis upon the significance of Luther for Mormonism.
- 353 (New). **This History of American Religion.** (2:2:0) S. Horsley
- 355 (New). **World Religions.** (2:2:0) A.W.S. L. M. Rogers
- 364 (114). **Survey of Christian History to the Thirteenth Century.** (2:2:4) A.W.S. (G-R) Horsley
- 365 (115). **Renaissance and Reformation.** (2:2:0) W. (G-R) Horsley
- 366 (116). **Modern Christian History.** (2:2:0) S. (G-R) Horsley

L.D.S. Church Organization and Administration

G. Byron Done, Chairman

This department is divided into the following areas:

Church Welfare: 311.

Genealogy: 317, 318.

General: 349.

Missionary Methods: 141, 142, 143, 321, 322, 323, 346, 347, 348.

Priesthood: 301.

Classes in missionary methods are provided primarily for students who look forward to missionary service in the stakes and missions of the Church. Courses 321, 322, and 323 form a single unified fifteen-hour program for persons who desire, for a single quarter, to study problems related to the presentation of the gospel. Lower division students may be admitted by consent of the instructor.

Lower Division Courses

- 141, 142, 143 (41, 42, 43).** Missionary Approach to the Gospel. (2:2:0 ea.)
A.W.S. (G-R) Staff
Open to all students. Intended for those who cannot elect the more intensive missionary-training course.

Upper Division Courses

- 301 (101).** Priesthood and Church Government. (2:2:0) A.W.S. (G-R)
Doxey, H. G. Clark
Powers, authority, and functions of the priesthood and its role in Church government.
- 311 (111).** The Church Welfare Program. (2:2:0) A.W.S. (G-R) Doxey
Historical development and economic and spiritual aspects of the L.D.S. Welfare Program.
- 317 (117).** The Principles of Genealogy and Temple Work. (2:2:0) A.W.S. (G-R)
Bennett
Principal topics: genealogy in the plan of salvation, mission of Elijah, research, pedigree, family and temple records, Genealogical Society of Utah, church ordinances, marriage, and temple work. Class trip to office of genealogical society.
- 318 (118).** Methods of Genealogical Research. (2:2:0) A.W.S. (G-R) Prerequisite: Ch. Adm. 317 or consent of instructor. Bennett
- 321 (121).** Training for Prospective Missionaries. (5:5:0) A.W.S. (G-R)
Ellsworth, Ricks
Doctrine used by missionaries, and practice in the use of the latest approved "Plan."
- 322 (122).** Latter-day Saint Doctrine for Prospective Missionaries. (5:5:0) A.W.S. (G-R) Bankhead
Study of vital doctrinal themes commonly used in the mission field.
- 323 (123).** Great L.D.S. Missionaries. (5:5:0) W. Barrett
Examination of the writings, methods, and spirit of certain great Latter-day Saint missionaries.
- 349 (149).** Economics of the Gospel Plan. (2:2:0) A.W.S. (G-R) Ellsworth
Art of applying principles and philosophy of the gospel to everyday situations, including vocational selection, personal records, investments, insurance, purchasing, etc.

The following courses also count in L.D.S. Church Organization and Administration: Ed. Instr. 300; H.D.F.R. 261; Languages: French 301, 302, 303; German 301, 302, 303; Spanish 301, 302, 303; Music 301, 302, 303; Recreation 387, 388; Youth Leadership 377; Speech 412. For a more detailed listing see the end of the Division of Religion Section.

Theology and Philosophy

Truman G. Madsen, Chairman

THEOLOGY

Lower Division Courses

- 101, 102, 103 (1, 2, 3). An Introduction to Mormonism.** (2:2:0) A.W.S. (G-R) Staff
 Examination of basic principles of Latter-day Saint theology for non-L.D.S. investigators of the gospel.
- 104, 105, 106 (4, 5, 6). The Principles and Doctrines of Mormonism.** (2:2:0) A.W.S. (G-R) Staff
 Consideration of basic principles and doctrines of the Church of Jesus Christ of Latter-day Saints.

Upper Division Courses

- 301, 302, 303 (101, 102, 103). The Principles, Doctrines, and Philosophy of the Church of Jesus Christ of Latter-day Saints.** (2:2:0) A.W.S. (G-R) Doxey, Ludlow, Tingey, Turner
 Distinctive doctrines and principles of the restored gospel of Jesus Christ. Recommended for upper division students who have not had 104, 105, 106.
- 325 (125). The Scientist Looks at Religion.** (2:2:0) Not given this year. Staff
 Certain concepts of religion in the light of modern science.
- 332 (132). Your Religious Problems.** (2:2:0) A.W.S. Belnap
 Consideration of problems pertaining to the individual student.

Advanced Undergraduate or Graduate Courses

- 590, 591, 592 (131, 133). Seminar.** (Arr.) A.W.S. Staff

PHILOSOPHY

Upper Division Courses

- 308 (108). Survey of Philosophy.** (3:3:0) A.W.S. (G-R; G-HA) Yarn
 Introduction to types, fields, and problems of philosophy.
- 310 (110). Introduction to Logic.** (3:3:0) A.W.S. (G-R; G-HA) Riddle
 Formal aspects of language, deductive logic and scientific method.
- Philosophy 308 or the consent of the instructor is prerequisite for 400 series courses.**
- 420 (285). Ethics.** (3:3:0) A. (G-R, G-HA) Madson
 Examination of the meaning and function of moral judgments and the leases of ethical commitment.
- 424 (112). Problems of Knowledge.** (3:3:0) A. (G-R, G-HA) Riddle
 Analysis of how experience becomes knowledge.
- 425 (111). Philosophy of Science.** (3:3:0) W. (G-R, G-HA) Riddle
 Examination of the conceptual framework of modern science.
- 426 (288). Types of Religious Philosophy.** (3:3:0) W. Yarn
 Survey of the philosophical bases of Christian religions.

GRADUATE STUDIES IN RELIGION

Sidney Sperry, Director

Requirements

The Department of Graduate Studies in Religion offers training leading to the Master of Arts, Master of Science, Master of Religious Education, and Doctor of Philosophy degrees. A student must have adequate preparation on the undergraduate level before beginning work leading to one of these degrees. The central committee of the graduate faculty of religion will determine if the student is properly prepared.

Each graduate student must fill all the general regulations and requirements for advanced degrees as outlined by the Graduate School. **The responsibility of knowing and fulfilling these regulations and requirements rests with the student.**

The Department of Graduate Studies in Religion offers instruction in church history and philosophy, Bible and modern scripture, and semitic languages. A student working toward the master's degree may select a major in any one of these fields. The Doctor of Philosophy degree, however, is offered at present only in church history and philosophy, and Bible and modern scripture. A candidate for a doctorate must elect either one or two minor fields, in consultation with his advisory committee.

Master's Degree

Before a student is admitted on a degree-seeking basis, the central committee of the graduate faculty of religion will carefully study and evaluate his preparation and fitness for a graduate program. After acceptance, the student must select his advisory committee, in consultation with the central committee, and must acquire at least 23 quarter hours of formal course or seminar work in his major field and 15 quarter hours of formal course or seminar work in his minor field; write an acceptable thesis embodying the results of research under faculty supervision; and successfully pass an oral examination.

Doctor of Philosophy Degree

Requirements for the Doctor of Philosophy degree either in the field of church history and philosophy or in the field of Bible and modern scripture are as follows: The student must complete, with distinction, each of the core courses specified below, (B grade or better). Inasmuch as many of the core courses are offered at the undergraduate level, the student may become proficient in these fields of knowledge before commencing his graduate studies. A demonstration of such proficiency through examination will make it unnecessary for the student to repeat a given course or courses as part of his graduate program.

The student must achieve a thorough mastery of his major, minor, and related fields, a program which will entail at least 60 quarter hours of course work. Part of this requirement may be included in the required core courses. The student will plan and work out his course work in consultation with his advisory committee. A student who intends to specialize in scriptural studies or church history will be required to demonstrate proficiency in the language or languages essential to research in his chosen area.

Upon completion of two years of graduate study in the doctoral program, the student must pass comprehensive written and oral examinations. These examinations will measure the student's maturity both in the core subjects and in his specialized field. They must be taken not later than two quarters before the degree is awarded. Successful completion of these examinations admits the student to candidacy for the doctor's degree. Should the student fail the examinations, the question of whether or when he may repeat them will be determined by his advisory committee in consultation with the central committee. In no case will these examinations be repeated earlier than six months after failure.

The candidate must select a topic in consultation with his advisory commit-

tee and write a satisfactory dissertation embodying the results of original research. Thereafter, the candidate must pass an oral examination, at which time he must publicly defend his dissertation before a formally appointed committee.

Seventy-four quarter hours of certain fundamental "core" courses, or their equivalents, are required of every candidate for the doctorate in religion. These include Church History and Philosophy 310, 425, 531, 532, 533, 571, 572, 573, 581, 582, 583, 611, 612, 613, 632, 651, 653; Bible and Modern Scripture 601, 621, 651, 652 and 653.

Church History and Philosophy

Advanced Undergraduate or Graduate Courses

- | | | | |
|-----|--------|--|--------------|
| 524 | (New). | Social, Economic and Political Thought of Joseph Smith. (5:5:0) A. | Andrus |
| | | | W.S. |
| 531 | (241). | Historical Development of L.D.S. Doctrines and Practices. (2:2:0) A. | Andrus, Rich |
| 532 | (242). | Historical Development of L.D.S. Doctrines and Practices. (2:2:0) W. | Andrus, Rich |
| 533 | (243). | Historical Development of L.D.S. Doctrines and Practices. (2:2:0) S. | Andrus, Rich |
| 544 | (New). | History of the Papacy. (3:3:0) A. | Horsley |
| 545 | (New). | Contemporary European Christianity. (3:3:0) W. | Horsley |
| 546 | (New). | Scholasticism, Humanism, and Mysticism. (3:3:0) S. | Horsley |
| 561 | (271). | Research Problems in Genealogy. (2:2:0) A.W.S. Prerequisite: Church Administration 318. | Bennett |
| 562 | (582). | Current Theological Trends. (3:3:0) W. | Madsen |
| 571 | (281). | History of Ancient Philosophy. (3:3:0) A.
Greek philosophy from Thales to the Sceptics. | Yarn |
| 572 | (282). | History of Medieval Philosophy. (3:3:0) W.
Christian philosophy from Augustine to the Reformation. | Yarn |
| 573 | (283). | History of Modern Philosophy. (3:3:0) S.
Philosophic thought from the Renaissance through the 19th Century. | Yarn |
| 574 | (284). | Contemporary Anglo-American Philosophy. (3:3:0) A.
Men and movements in naturalism and logical positivism. | Madsen |
| 579 | (New). | Contemporary Continental Philosophy. (3:3:0) W.
20th Century developments in existentialism, phenomenology and Marxism. | Madsen |
| 581 | (New). | Comparative World Religions. (2:2:0) A.
Hinduism, Jainism, and Sikhism. | Rogers |
| 582 | (New). | Comparative World Religions. (2:2:0) W.
Buddhism, Taoism, Confucianism, and Shintoism. | Rogers |
| 583 | (New). | Comparative World Religions. (2:2:0) S.
Judaism, Zoroastrianism, and Islam. | Rogers |

Graduate Courses

- | | | | |
|-----|--------|---|----------------------|
| 611 | (New). | Advanced Survey of L.D.S. History. (3:3:0) A. | Larsen, Andrus, Rich |
| | | | 1800-1847. |
| 612 | (New). | Advanced Survey of L.D.S. History. (3:3:0) W. | Larsen, Andrus, Rich |
| | | | 1847-1896. |

- 613 (New). Advanced Survey of L.D.S. History. (3:3:0) S. Larsen, Andrus, Rich
1896 to the present.
- 621 (221). Special Problems in L.D.S. Church History. (2:2:0) A. Larsen, Rich
- 622 (222). Special Problems in L.D.S. Church History. (2:2:0) W. Larsen, Rich
- 623 (223). Special Problems in L.D.S. Church History. (2:2:0) S. Larsen, Rich
- 632 (New). Reformation and Counter-Reformation. (5:5:0) S. Horsley
- 651 (New). Seminar in Philosophical Analysis. (3:3:0) A. Riddle
- 653 (New). Seminar in Philosophical Religion. (3:3:0) W. Madsen
- 699 (300). Thesis for Master's Degree. (Arr.) Staff
- 799 (New). Doctoral Dissertation. (Arr.) Staff

Religious Education

Advanced Undergraduate or Graduate Courses

- 534 (244). Advanced Theology. (2:4:0) Su. Staff
- 535 (New). Advanced Theology. (2:4:0) Su. Staff
- 536 (New). Advanced Theology. (2:4:0) Su. Berrett, Staff

Graduate Courses

- 601 (Ch. H. 201). Survey of Religious Education. (2:2:0) A.W.S. Belnap
- 603 (Ch. H. 202). Methods of Teaching Religion in the Secondary School. (3:5:0) Su. Berrett, Staff
- 604 (New). Methods of Teaching Religion in the Secondary School. (3:5:0) Su. Berrett, Staff
- 605 (New). Curriculum of Religion in Secondary Schools. (3:5:0) Su. Berrett, Staff
- 606 (New). Curriculum of Religion in Secondary Schools. (3:5:0) Su. Berrett, Staff
- 607 (New). Methods of Teaching Religion in College. (3:5:0) Su. Berrett, Staff
- 608 (New). Methods of Teaching Religion in College. (3:5:0) Su. Berrett
- 609 (New). Curriculum of Religion in Colleges. (3:5:0) Su. Berrett
- 610 (New). Curriculum of Religion in Colleges. (3:5:0) Su. Berrett, Staff
- 611 (Ch. H. 251). Problems of Teaching Religion. (2:4:0) Su. Staff
- 614 (New). Principles of Teaching Religion in Secondary Schools. (3:5:0) Su. Berrett, Staff

Bible and Modern Scripture

Graduate Courses

- 601 (New). Literature and Religion of the Old Testament. (5:5:0) A. Rogers, Rasmussen, Sperry
- 602 (201). The History of Israel. (5:5:0) A. Rogers, Rasmussen, Sperry

- 603 (202). *The Prophets of Israel*. (5:5:0) W. Rogers, Rasmussen, Sperry
- 604 (New). *The Canon and Text of the Old Testament*. (3:3:0) A. Staff
- 605 (New). *The Apocrypha and Pseudepigraphs*. (3:3:0) W. Nibley
- 606 (New). *Hebrew Wisdom Literature*. (3:3:0) W. Staff
- 607 (203). *The Manners and Customs of the Hebrews*. (3:3:0) A. Sperry
- 619 (New). *Seminar on the Old Testament*. (2-5:2-5:0) Staff
- 621 (New). *Literature and Religion of the New Testament*. (5:5:0) A. Staff
- 622 (New). *The History of New Testament Times*. (3:3:0) A. Staff
- 623 (206). *The Life and Teachings of Jesus*. (5:5:0) W. Sperry
- 624 (207). *Paul's Life and Letters*. (5:5:0) S. Sperry
- 625 (208). *The General Epistles and the Apocalypse*. (3:3:0) A. Staff
- 626 (New). *The Text and Canon of the New Testament*. (3:3:0) W. Staff
- 627 (New). *The Textual Criticism of the New Testament*. (3:3:0) W. Staff
- 641 (New). *The Gospel and Acts in Greek*. (3:3:0) A. Prerequisite: Ability to pass departmental examination in Greek. Nibley
- 642 (New). *Paul's Epistles in Greek*. (3:3:0) W. Prerequisite: Ability to pass departmental examination in Greek. Nibley
- 643 (New). *The General Epistles and the Apocalypse in Greek*. (3:3:0) S. Prerequisite: Ability to pass departmental examination in Greek. Nibley
- 649 (New). *Seminar on the New Testament*. (2-5:2-5:0) Staff
- 651 (211, 511). *An Analysis of the Book of Mormon*. (5:5:0) A. Sperry
- 652 (213). *An Analysis of the Doctrine and Covenants*. (5:5:0) W. Sperry
- 653 (New). *An Analysis of the Pearl of Great Price*. (3:3:0) S. J. R. Clark
- 659 (New). *Seminar on Modern Scripture*. (2-5:2-5:0) Staff
- 699 (300). *Thesis for Master's Degree*. (Arr.) Staff
- 799 (New). *Doctoral Dissertation*. (Arr.) Staff
- Work in Semitic languages may be applied toward a major in Bible and modern scripture.

(The attention of majors in Scripture is called to courses in archaeology offered by the Department of Archaeology, especially courses 655 and 665.)

Semitic Languages

Advanced Undergraduate or Graduate Courses

- 511, 512, 513 (221, 222, 223). *Elementary Hebrew*. (5:5:0) A.W.S. No prerequisites. Rasmussen
- Taught as a "living language" for use by those who wish to converse and those who wish to use it as a tool for studying and teaching the Old Testament. Methods and materials for teaching Hebrew in the light of modern language methodology are taught. Open to all who demonstrate linguistic ability.
- 514, 515, 516 (224, 225, 226). *Advanced Hebrew Grammar and Selected Readings from the Old Testament*. (3:3:0) A.W.S. Prerequisite: Courses 511, 512, 513 or equivalent. Rasmussen

Graduate Courses

- 601, 602, 603 (New).** Selections from the Wisdom Literature, Major and Minor Prophets, and Psalms. (2-5:2-5:0) A.W.S. Prerequisite: Two years of Hebrew or consent of instructor. Rasmussen, Sperry
- 607, 608, 609 (231, 232, 233).** Biblical Aramaic and the Targums. (2:2:0) A.W.S. Prerequisite: Two years of Hebrew or consent of instructor. Sperry
- 610 (234).** The Reading of Ancient Hebrew Inscriptions. (2-3:2-3:0) Given on request. Prerequisite: Two years of Hebrew or consent of instructor. Sperry
- 611, 612, 613 (241, 242, 243).** Elementary Syriac. (3:3:0) A.W.S. Prerequisites: 511, 512, 513. Sperry
- 614, 615, 616 (244, 245, 246).** Advanced Syriac. (2:2:0) A.W.S. Sperry
- 621, 622, 623 (251, 252, 253).** Elementary Akkadian. (2:2:0) A.W.S. Prerequisite: Two years of Hebrew or consent of instructor. Sperry
- 625, 626, 627 (255, 256, 257).** Elementary Egyptian. (2:2:0) A.W.S. Prerequisite: Two years of a Semitic language or consent of instructor. Staff
Hieroglyphics.
- 699 (300).** Thesis for Master's Degree. (Arr.) Staff

These courses also count in Religion:

- Archaeology 310.** General Near Eastern and Biblical Archaeology. (3:3:0)
- Archaeology 360.** Ancient Civilizations of America. (3:3:0)
- Archaeology 596, 597, 598.** Readings in Archaeology. (2:0:6)
- Archaeology 655.** Special Studies in Biblical Archaeology. (2:0:6)
- Archaeology 665.** Special Studies in Book of Mormon Archaeology. (2:0:6)
- Education: Instruction 300.** Teaching in the Church. (2:2:0)
- Human Development and Family Relationships 261.** The Latter-day Saint Family. (2:2:0)
- Languages: French 301, 302, 303.** The Gospel in French. (2:2:0 ea.)
- Languages: German 301, 302, 303.** The Gospel in German. (2:2:0 ea.)
- Languages: Spanish 301, 302, 303.** The Gospel in Spanish. (2:2:0 ea.)
- Music 301.** Elementary Baton Techniques and Hymnody. (2:2:0)
- Music 302.** Intermediate Baton Techniques and Ward Choir Direction. (2:2:0)
- Music 303.** History of Sacred Music. (2:2:0)
- Recreation 387.** Planning for Social Recreation. (2:2:0)
- Recreation 388.** Leadership in Church Dances. (2:2:0)
- Speech 412.** Religious Drama. (2:2:0)
- Youth Leadership 377.** Scouting in the L.D.S. Church. (2:2:1)

R.O.T.C.

(See courses in Air Science.)

Russian

(See courses in Languages.)

Scouting Education

(See courses in Youth Leadership)

Scripture

(See courses in Religion.)

Secondary Education

(See courses in Education: Instruction.)

Secretarial Training

(See courses in Business Education and Office Management.)

Semitics

(See courses in Languages and in Religion.)

Sewing

(See courses in Clothing and Textiles.)

Sociology

Professors: Bradford (chairman, 1216A SFLC), Ballif*, Symons.

Associate Professors: Canning, Smith.

Assistant Professors: Christiansen, Dyer, Empey, V. W. Larsen, Payne.

Sociology is one of the social sciences which study human behavior. Specifically, sociology studies how behavior is affected by the fact that men interact with one another, live in groups, and develop social systems, institutions, roles, statuses and culture.

Sociology, therefore, has relevance for those planning careers of social work, teaching, counseling, research, scouting, Red Cross work, community planning and government service.

Majors in the department are required to take Sociology 111, 112, 320, 503, 504, 505, 519, 528, and to present total sociology credit of 45 hours or more. A maximum of 10 of the 45 hours may be chosen from a selected list of courses in other departments, with consent of the departmental adviser. Courses listed as Soc-Psych (Social Psychology) may be used for credit either in Psychology or Sociology, but not in both.

Recommended courses, beyond those required, are listed below for each of several goals that sociology majors might have in mind.

General cultural education: any or all courses.

Teaching: 348, 350, 357, 380, 389, 392, 403, 423, 426, 443, 446, 449, 460, 512, 542, 543, 550, 551, 552, 555, 560, 570.

Social work: 316, 348, 350, 357, 360, 362, 363, 380, 389, 392, 403, 426, 449, 543, 551, 552, 555, 560, 580.

Research: 520, 521, 524, 536, 590.

Sociology is one of the subjects comprising the composite major in social science designed for prospective teachers. See courses in Social Science listed under the College of Education.

Suggestion for a Minor

Ten hours of upper division courses plus Sociology 111 and 112.

Lower Division Courses

- 111 (11). Introductory Sociology.** (5:5:0) A.W.S. (G-SS) Staff
 Foundation course designed to give groundwork for all sociological study. Presents general view of how social organization affects human behavior.
- 112 (12). Social Problems.** (5:5:0) A.W.S. (G-SS) Staff
 Analyzes forces within society which produce disorganization. Considers specific problems such as crime, race relations, mental health, divorce, alcoholism, and delinquency.
- 125 (New). Applied Sociology.** (3:3:0) A.W.S. (G-SS) Staff
 Presents applications of sociological principles and teachings in such fields as teaching, business and industry, nursing, military life, and medicine.

Upper Division Courses

- 316 (116). Social Control.** (3:3:0) S. Larsen, Smith
 Studies importance of public opinion, belief, social suggestion, ceremony, personal ideals, etc. as means of controlling behavior.

- 320 (180). **Social Statistics.** (5:5:0) A. Canning, Smith
 Considers statistical procedures used in sociological research, including analyses of measurements of central tendency, dispersion, symmetry, testing hypotheses, estimation from samples, and scientific prediction.
- 348 (138). **Collective Behavior.** (2:2:0) A. Ballif, Larsen
 This course deals with the action of groups which operate without clear-cut direction from the culture within which they are found. Such groups as lynching mobs, riots, and crowds are analyzed as well as mass behavior and communication. The causes, nature, and consequences of such behavior are considered.
- 350 (114). (Soc.-Psych.) **Introduction to Social Psychology.** (3:3:0) W. (G-SS) Staff
 Prerequisite: Sociology 111 or Psychology 111.
 Nature of social influence; socialization; concepts of norm, role, and status; development of beliefs and attitudes; leadership; group processes. Applications to prejudice, persuasion, social control.
- 357 (177). (Soc.-Psych.) **Group Relations and Leadership.** (3:3:0) A.W.S. Staff
 Designed to help the individual participate effectively in group life and to assist leaders to become efficient in role performance.
- 360 (144). **Introduction to Social Work.** (3:3:0) A. Ballif, Symons, Slater
 Introductory survey of the various fields and methods of social work. Considers implications of social work for the related professions.
- 362 (146). **Introduction to Social Case Work.** (2:2:0) W. Slater, Symons
 Analyzes principles and practices of case work with the maladjusted and dependent.
- 363 (147). **Introduction to Field Experience in Social Work.** (1:1:0) W. Symons, Slater
 Designed to acquaint the student with agencies actually engaged in social work. To be taken concurrently with Sociology 362.
- 380 (124). **Introductory Criminology.** (3:3:0) A. Empey, Smith, Symons
 Analyzes nature and extent of criminal behavior. Emphasizes current theory and research as they relate to the causes of crime.
- 383 (125). **Juvenile Delinquency.** (3:3:0) W. Prerequisite: Sociology 111. Symons, Smith
 Analyzes lawlessness of children and adolescents. Stresses causations, treatment, prevention and outlook.
- 386 (127). **Organized Crime.** (3:3:0) S. Prerequisite: Sociology 111, 380. Symons, Empey
 Study of historical backgrounds for development of organized crime in the United States. Considers proposals for prevention.
- 389 (112). **Social Aspects of Mental Health.** (3:3:0) S. Canning, Symons
 Study of personality disorders and emotional maladjustments which originate in group life. Discusses social causation, treatment and prevention of mental ills.
- 392 (128). **Racial and Minority Group Relations.** (3:3:0) W. (G-SS) Ballif, Larsen
 Studies basic processes in present-day inter-relations of racial and minority groups. Analyzes prejudice—its causes and programs for its reduction.
- 403 (New). **Marriage and the Family in American Society.** (3:3:0) A.W.S. Bradford, Canning, Dyer, Christiansen, Empey
 Analyzes the effect that American society has upon successful marriage and family living. Various roles in the family such as the father, mother, child, adolescent and the aged are discussed in connection with the kinds of problems each faces in contemporary society.

- 423 (156). **The Sociology of Rural Life.** (3:3:0) A. Payne, Symons, Bradford
Gives attention to the particular factors and problems of rural life.
- 426 (160). **The Sociology of Urban Life.** (5:5:0) W. Smith, Payne
Gives attention to particular factors and problems of urban life. Emphasizes human ecology.
- 443 (140). **Sociology of Adjustment in Modern America.** (3:3:0) S. (G-SS)
Dyer, Bradford, Empey
Practical course designed to assist the individual in understanding some of the basic features of present-day America.
- 446 (141). **Human Relations in Industry.** (3:3:0) A. Larsen
Studies role that social forces play in determining industrial organization. Emphasizes labor-management relations and problems of applied industrial sociology.
- 449 (136). **Community Organization, Action and Planning.** (3:3:0) A. (G-SS)
Ballif, Dyer, Larsen
Considers basic fundamentals of community life. Analyzes techniques and methods for organizing community resources for efficient achievement of community objectives.
- 460 (108). **Cultural Anthropology.** (3:3:0) W. Canning, Dyer
Considers meaning and content of culture in various societies throughout the world.

Advanced Undergraduate or Graduate Courses

- 503 (103). **Systematic Sociology I.** (3:3:0) A. Bradford, Canning
Analysis of the development of sociological theories and generalizations.
- 504 (104). **Systematic Sociology II.** (3:3:0) W. Bradford, Canning, Smith
Analysis of generalizations derived by sociology concerning how social interaction, groups, institutions, roles, statuses and culture affect human behavior.
- 505 (110). **Systematic Sociology III.** (3:3:0) S. Bradford, Canning, Dyer
Continuation of Sociology 504.
- 508 (108). **Social Ethics.** (3:3:0) A. Lloyd
Identifies and analyzes fundamental American values and value systems.
- 512 (176). **Educational Sociology.** (3:3:0) A. Smith
Analyzes principles of sociology of education and their implication for theory and practice of school administration, curricula, and methods of instruction.
- 516 (178). **Sociology of Religion.** (3:3:0) W. Ballif, Smith, Empey
Analyzes influences of social factors in development of various religious systems.
- 519 (182). **Methods of Research in Sociology.** (5:5:0) A.W. Canning, Larsen, Smith
Analyzes methods used in investigation of sociological data. Field projects give the student actual experience in research.
- 520 (184). **Practicum in Research I.** (2:2:0) W. Staff
Theory and practice in sociological research.
- 521 (194). **Practicum in Research II.** (1-3:0) S. Staff
Continuation of Sociology 520.
- 524 (184). **Advanced Statistics.** (3:3:0) W. Canning, Smith
Advanced course designed for those who intend to do research or continue in graduate work.

- 528 (189). **Seminar.** (3:3:0) A.W.S. Staff
Analysis, formation and integration of basic sociological concepts.
- 536 (195). **Directed Research.** (1-3:0:2-6) A.W.S. Staff
Direction in methodology of research in the field of sociology and in the adequate presentation of material.
- 542 (107). **Development of Social Reform Movements in the United States.** (3:3:0) W. Payne, Symons
Discusses social aspects of various movements from Adam Smith to John Dewey with special emphasis upon social reform movements in the United States.
- 543 (134). **Social Legislation.** (3:3:0) Ballif
Study of basic problems and techniques of social legislation. Notes and analyzes various systems now in operation.
- 544 (292). **Public Opinion.** (3:3:0) S. Larsen, Ballif, Payne
Discusses role of public opinion in various area of social life.
- 550 (152). **Effects Upon Society and Individuals of Population Processes.** (3:3:0) A. Bradford, Smith, Payne
Presents effects upon the individual and society of such population processes as migration, birth and death. Analyzes a population policy for the United States.
- 551 (162). **Sociology of Recreation.** (3:3:0) W. Ballif, Payne
Treats relations of recreational interests to growth, group behavior and social maladjustments. Emphasizes basic theories of recreative activities.
- 552 (150). **(Soc.-Psych.) Personality: Culture and Society.** (3:3:0) A. Staff
Study of the role of culture and society in the forming and functioning of personality. Compares various peoples and cultures.
- 555 (New). **(Soc.-Psych.) Group Dynamics.** (3:3:0) S. Staff
- 560 (172). **The Family.** (3:3:0) W. Bradford, Empey, Symons
Presents historical development of the family as an institution. Emphasizes the family in several different societies and problems created by various family systems.
- 570 (New). **Class, Status, and Power.** (3:3:0) S. Staff
Analyzes major values that underly such organizations as hospitals, publication systems and power relations.
- 580 (New). **Social Relations in Medical and Health Organizations.** (3:3:0) Staff
Analyzes major values that underly such organizations as hospitals, public health agencies and medical and dental professions together with the structure of the organizations and the function they perform in our society. Discusses interactions between the professional health person and the lay person. Course designed for pre-medical, pre-dental and health education students.
- 583 (226). **Prison Management and the Reformatory Treatment of Criminals.** (3:3:0) W. Empey, Smith, Symons
- 590 (260). **Social Institutions and Social Change.** (3:3:0) W. Staff

Graduate Courses

- 601 (188). **Seminar.** (2:2:0) W. Staff
Develops a conceptual scheme for studying some of the major sociological research projects.
- 605 (205). **Advanced Sociological Thought.** (3:3:0) W. Canning, Smith, Symons
- 606 (206). **Advanced Contemporary Sociology.** (3:3:0) S. Bradford, Dyer, Smith

- 640 (New).** Field Methods and Theory in Social Anthropology. (3:3:0) S.
Canning, Dyer
- 686 (230).** Problems in Race Relations. (3:3:0) A. Symons, Ballif, Larsen
- 699 (300).** Thesis for Master's Degree. Staff
- 796, 798 (296, 298).** Special Research Problem. (1-3:0:2-6) A.W.S. Staff

Soils

(See courses in Agronomy.)

Spanish

(See courses in Languages.)

Speech and Dramatic Arts

Professors: H. I. Hansen (chairman, 123 SpC), de Jong, Mitchell, Morley.

Associate Professors: Bateman, Gledhill, Mecham, Woodbury.

Assistant Professors: Clinger, Jex, K. B. Pardoe.

Instructors: Bowers, McKinlay, O. Rich, Richardson, Struthers.

Requirements for Major

The Department of Speech and Dramatic Arts offers both B.A. and M.A. degrees. It is recommended that students majoring in speech and dramatic arts qualify for the B.A. degree by completing foreign language requirement. Students may elect to specialize in one of five divisions of speech. Required courses may be waived only by acceptance of the student's petition by the department waiver committee. **Senior Seminar 391 is required of all majors and minors and is taught Spring Quarter only.**

Theatre and Dramatic Art

	Hours
Basic courses: 101, 121, 241, 391, 460, 471	22
Additional courses for specialization: 122, 123, 126, 316, 317, (319, 320, 321—6-9 hrs.)	27
Total Hours	49-52

Additional courses recommended: Speech 260, 315, 318; English 282, 345, 356, 382, 543; Physics 103.

Sequence of Courses

	Autumn	Winter	Spring	Any
First Year	101 (5)	121 (3)	122 (3)	
Second Year		123 (5) 422 (3)	423 (3)	126 (2)
Third Year	219 (2)	320 (2)	321 (2) 325 (3)	460 (3) 471 (5)
Fourth Year	316 (3)	317 (3)	391 (3)	

Public Speaking

	Hours
Basic courses: 101, 121, 241, 391, 460, 471	22
Additional requirements for specialization: 103, 111, 122, 401, 402, 403, plus 8-9 hours of electives from 255, 305, 325, 547	26
Total Hours	48

Additional courses recommended: Speech 260; courses in American history and government.

Sequence of Courses

	Autumn	Winter	Spring	Any
First Year	101 (5)	121 (3)	241 (3)	
Second Year	111 (3)	122 (3)	103 (2)	
Third Year	401 (3)	402 (3)	403 (3)	460 (3)
Fourth Year			391 (3)	

Speech and Hearing Science and Rehabilitation

	Hours
Basic courses: 101, 121, 241, 391, 460, 471, 473	22
Additional requirements for specialization: 473, 480, 483, 484, 541, 545, 546 plus selection of alternative 1, 2, or 3 below.	18
1. Public School Speech and Hearing Therapy: 366, 450, 474, 482	14
2. Clinical Speech and Hearing Therapy: 472, 481, 485, 494, 542	10-13
3. Audiology: 470, 474, 482, 485, 547	14

For those seeking certification as public school speech and hearing therapists, the general elementary credential is required. Course work may be substituted as follows: Speech 450 (6 hrs.) for one quarter of practice teaching (Education: Instruction 448); Speech 480, 481, 482 (2 hrs. ea.) will permit taking Education: Instruction 534 (Overview of Elementary Instruction—5 hrs.) in lieu of Education: Instruction 345, 346, or 446 (Curriculum and Methods).

Total Hours 53

Sequence of Courses

	Autumn	Winter	Spring
First Year	101 (5)	121 (3)	
Second Year	241 (3)		471 (5)
Third Year	473 (3)	483 (2)	484 (2)
	480 (2)	546 (3)	460 (3)
Fourth Year	541 (3)	545 (3)	391 (3)

Note: Speech 260 (Phonetics), Speech 547 (Psychology of Speech) and Psychology 340 (Mental Hygiene) are required for A.S.H.A. certification. For instructions on additional certification requirements (A.S.H.A., Public School Credentials, etc.) consult with speech and hearing area staff.

Radio and Television

	Hours
Basic courses: 101, 121, 241, 391, 460, 471	22
Additional courses for specialization: 349, 352, 353, 354, 452, 453, 454 plus seven hours of any of the following: 251, 255, (319, 320, 321—3 hours only), 346, 347, 348, 350, 351, Journalism 351, 356.	26
Total Hours	48

Sequence of Courses

	Autumn	Winter	Spring
First Year	101 (5)	121 (3)	123 (3)
Second Year	241 (3)	252, 253 254 (3)	255 (3)
Third Year	452 (1)	453 (1)	454 (1)
	351 (5)	Jour. 351 (5)	Jour. 356 (5)
Fourth Year	346 (1)	347 (1)	348 (1)
	350 (5)	460 (3)	391 (3)
	352 (2)	353 (2)	354 (2)
		349 (5)	

Students majoring in this area should select a closely related minor. The following minors are suggested: sociology, psychology, political science, journalism, music, commerce, English, education, and home economics.

General Speech for Teachers in Secondary Schools

	Hours
Basic courses: 101, 121, 241, 391, 460, 471	22
Additional requirements for specialization: 103, 111, 122, 123, 126,	

(319, 320, 321—6 hrs.), 401 24

Total Hours 46

Additional courses recommended: Speech 260, 305, 317.

For those students who plan to qualify for a Secondary Teaching Certificate, Speech 377, 478 and 479 will be required.

Sequence of Courses

	Autumn	Winter	Spring	Any	Other Req.
First Year	101 (5)		121 (3)		Psych. 111 (5)
Second Year	111 (3)	123 (5)	321 (2)		Lang. (15)
	122 (3)	320 (2)	126 (2)		Lang. (15)
	319 (2)				
Third Year	241 (3)		377 (4)	460 (3)	Physics 103 (3)
	401 (3)			471 (5)	
Fourth Year		478 (4)	391 (3)		
		479 (6)			

Requirements for Minor

The requirements for the general minor in speech are made up of the following courses: Speech 102, 121, 319-320-321 (6 hrs.), 460 and 7 hours of electives.

The requirements for a minor in speech and hearing rehabilitation are Speech 101, 121, 366, 471, 473, 480, 482, 483, 484, 545 and 594 (1 hr.)

Lower Division Courses

- 101 (1). Fundamentals of Speech.** (5:5:0) A.W.S. Staff
Beginning course to aid self-improvement in speech as a mode of communication. Provides opportunity to practice for greater effectiveness in personal use of the various speech skills. Recommended for speech majors, prospective teachers, and students who desire improvement in their everyday speech activities.
- 102 (2). Introduction to Public Speaking.** (3:3:0) A.W.S. Staff
Practical and general service course designed for students who desire to improve their speech efficiency, poise, and self-confidence in public speaking situations. Provides opportunity to develop and improve skill in organization and delivery of all types of speeches encountered in business, professional, social, and religious activities.
- 103 (3). Group Discussion.** (2:2:0) A.W.S. Staff
Concerned with a basic democratic procedure—cooperative thinking. Addressed to those who serve on committees or boards, attend staff meetings, talk over common problems in church, school, or office—to all who are preparing to participate in or lead informal discussion in small groups. Promotes more effective group thinking through discussion.
- 105p (5p). Speech Clinic.** (1:1:0) A.W.S. Mecham, Morley, Jex
Corrective treatment of stuttering, lisping, and other forms of speech disorders.
- 106p (6p). Speech Coaching.** (1:1:0) A.W.S. Staff
Personal attention to individual needs beyond classroom practice.
- 107, 108, 109 (7, 8, 9). Speech for Foreign Students.** (2:2:3 ea.) A.W.S. Jex
- 111 (11). Introduction to Argument and Debate.** (3:3:0) A.W.S. Richardson
Principles of argumentation and practice in debate.

- 112, 113, 114 (12a, b, c). Debate Techniques.** (1:1:1 ea.) A.W.S. Bateman, Richardson
Open to members of the forensic squad who obtain approval of the Speech Department and the Debate Council. To obtain credit in debating, students must register for this course, with at least two hours of instruction each week.
- 121 (24). Voice and Diction.** (3:3:2) A.W.S. (G-HA) Staff
- 122 (22). Fundamentals of Interpretation.** (3:3:2) A.W.S. (†G-HA) Prerequisite: Speech 121. Staff
- 123 (23). Fundamentals of Acting.** (5:3:2) A.W.S. (G-HA) Hansen, Woodbury
Study of character enactment.
- 126 (26). Makeup.** (2:2:0) A.W.S. Staff
- 241 (41). Introduction to Radio and Television Broadcasting.** (3:3:2) A.W.S. Rich, McKinlay
Discussion of scope, influence, current practice, problems, and social implications of the American system of radio and television broadcasting; microphone practice and experience.
- 251 (51). Radio and Television Studio and Control Room Techniques.** (3:3:0) A. Rich
Use of radio and TV facilities, sound effects, records, TV lighting and TV staging.
- 255 (53). Beginning Radio and Television Production.** (3:3:0) W.S. McKinlay, Rich
Practice in performance, production, and direction of radio and television dramatic and commercial programs.
- 260 (60). Practical Phonetics.** (3:3:0) A.S. de Jong
Designed to give better understanding of diction in English and foreign languages.

Upper Division Courses

- 301, 302, 303 (102a, b, c). Debate Techniques.** (1:1:1 ea.) A.W.S. Richardson
Open to members of the forensics squad who obtain approval of the Speech Department and the Debate Council. To obtain credit in debating, students must register for this course, with at least two hours of instruction each week.
- 304p (104p). Public Speaking.** (1:1:0) A.W.S. Staff
Individual instruction. Fee.
- 305 (107). Parliamentary Procedures.** (2:2:0) S. Bateman
Rules governing organizations and legislative bodies.
- 307 (New). Program Directors.** (1:1:0) A.W.S. Richardson
- 315 (112). Introduction to the Theatre.** (3:3:0) A.W.S. Staff
Introduces students to fundamental theories of theatre arts to develop a discriminating appreciation and to provide a basic background for those interested in theatre.
- 316, 317, 318 (124, 125, 126). Theatre History.** (3:3:0 ea.) A.W.S. (G-HA) Woodbury, Hansen
- 319, 320, 321 (161a, b, c). Stage Craft.** (1-3:3:1, 1-3:0:1-3, 1-3:0:1-3) A.W.S. Struthers
College and workshop productions in laboratories. Students may earn a maximum of nine hours.

- 323 (163). **Technique of Playwriting.** (3:3:0) A. Hansen
- 324 (165). **Historic Costume.** (3:3:0) W. Staff
- 325 (172). **Advanced Interpretation.** (3:3:0) S. (G-HA) Mitchell, Pardoe
- 346, 347, 348 (151, 152, 153). **Advanced Radio Workshop.** (1:0:1 ea.) A.W.S. Rich
Prerequisite: consent of the instructor.
Experience in planning and producing radio programs for off-campus stations.
- 351 (156). **Radio and Television Program Writing.** (5:5:0) S. Prerequisite: consent of instructor. McKinlay
Practice in writing of various types of low-cost radio and television programs.
- 391 (162). **Senior Seminar.** (3:3:0) S. Required of all seniors, Hansen, Staff
- 401 (100). **Advanced Speech Composition.** (3:3:0) A. Prerequisite: Speech 101. Staff
Advanced study and practice in styles of speaking.
- 402 (101). **Advanced Argument and Debate.** (3:3:0) W. Prerequisite: Speech 111. Staff
Analysis of classic debates and practice in argumentative writing and speaking.
403. **Persuasive Speaking.** (3:3:0) A.W.S. Prerequisite: Speech 101 or 102. Staff
Study and practice of advanced persuasion as used in religious and occasional speaking.
- 412 (167). **Religious Drama.** (2:2:0) A.W.S. Hansen
- 422 (122). **Intermediate Acting.** (3:3:2) A.W. Prerequisite: Speech 123 or consent of instructor. Hansen
- 423 (123). **Advanced Acting.** (3:3:2) S. Prerequisite: consent of instructor. Hansen
- 427p (127p). **Dramatic Technique.** (2:2:0) A.W.S. Staff
- 449 (154). **Radio and Television Programs and Audiences.** (5:5:0) A. McKinlay
Analysis and extensive observation of basic program forms used in radio and television; requirements of effective program structure; consideration of audience situation.
- 450 (155). **Radio and Television Law and Program Planning.** (5:5:0) W. McKinlay
Discussion of the influence of public attitudes and decisions of regulatory bodies on basic program standards; practice in planning radio and television programs consistent with these standards.
- 452, 453, 454 (52a, b, c). **Radio and Television Announcing.** (1:1:0 ea.) A.W.S. McKinlay
Practice in presentation of all types of radio and television materials.
- 455, 456, 457 (157, 158, 159). **Television Workshop.** (2:2:0 ea.) A.W.S. Prerequisite: consent of instructor. Rich
Practice in production and direction of television programs for release over commercial stations.
- 460 (160). **Directing.** (3:3:2) A.W.S. Prerequisite: consent of instructor. Staff
For advanced students only.
- 470 (179). **Speech Science.** (4:3:2) W. Morley
Study of aspects, physics, physiology, phonetics and experimental phonetics underlying the speech process.

- 471 (180). Introduction to Speech Correction. (5:3:2) A.S. Prerequisite: Speech 121. Morley
Causes, symptoms, and treatment of various types of abnormal speech.
- 472 (New). Normal Development of Oral Language. (2:2:0) A. Mecham
- 473 (182). Introduction to Aural Rehabilitation. (3:3:0) W. Prerequisite: Speech 471. Jex
- 474 (183). Lip Reading. (3:3:0) S. Prerequisite: Speech 473. Jex
Teaching of lip reading to children and adults.

Advanced Undergraduate or Graduate Courses

- 524 (New). High School Forensics and Programming. (1-3:1-3:1-9) S. Bateman
- 525 (New). Debate Coaching. (1-3:1-3:0) A.W.S. Richardson
- 541 (185). Stuttering. (3:3:0) A. Morley
- 542 (186). Organic Speech Disorders. (3:3:0) W. Mecham
- 545 (284). Public School Audiometry. (3:3:0) A.W.S. Prerequisite: Speech 473. Jex
- 546 (286). Anatomy of Ear and Vocal Organs. (3:3:0) Morley
- 547 (287). Psychology of Speech. (3:3:0) S. Prerequisite: Psychology 111. Morley
- 570, 571 (New). Creative Dramatics. (3:3:0 ea.) W. Mitchell
- 572, 573 (New). Children's Theatre. (3:3:0 ea.) S. Mitchell
- 577, 578, 579 (299). Playwriting. (3:1:2 ea.) A.W.S. Hansen, Mitchell

SPEECH EDUCATION

- 366 (171). Speech in the Elementary Schools. (3:3:0) W.S. Jex
Objectives and methods of developing good speech habits in children. Recognition and management of minor speech problems.
- 377 (120). Basic Classroom Procedures. (4:4:3) A.W. Prerequisite: E.R.S. 305. Clinger
Lectures, demonstrations, observations.
For course description and fees see Education: Instruction 377.
- 450 (118). Practice Teaching in Correction of Speech and Hearing Disorders in the Public Schools. (6:0:20) A.W.S. Prerequisites: Education: Instruction 118 and completion of a minimum of 150 hours in clinical practicum in Speech Education 483, 484, 485. Jex
Supervised teaching in public elementary school for a full quarter on a half-day basis. A qualified student clinician registering for this course will be placed in a public school district where there is a practicing public school speech and hearing correctionist. The student teacher will get experience in diagnosis and therapy with children having speech and hearing disorders. Student teachers will participate in weekly seminars and personal conferences with their supervisors. The nature of this course dictates that students limit their load to 15 quarter hours. A special fee of \$15 is charged to equalize the cost of travel for student teachers regardless of location of cooperating public schools.
- 478 (138). Unit Planning and Teaching. (4:3:5) A.W. Prerequisite: Speech Education 377. Clinger
For course description and fees see Education: Instruction 478.

- 479 (139). **Secondary Student Teaching.** (7:1:20) A.W.S. Prerequisites: Speech Education 478 and completion of two-thirds of courses required for teaching major and minor or composite major. Clinger
For course description and fees see Education: Instruction 479.
- 480 (190). **Clinical Methods in Correction of Functional Disorders of Speech.** (2:2:0) A.S. Prerequisite: Speech 471. Staff
- 481 (191). **Clinical Methods in Correction of Organic Speech Disorders.** (2:2:0) W. Prerequisite: Speech 542. Mecham
Diagnosis and treatment methodology.
- 482 (192). **Clinical Methods of Teaching Speech to the Deaf and Hard of Hearing.** (2:2:0) S. Prerequisite: Speech 473. Jex
- 483, 484, 485 (195a, b, c). **Clinical Practice in Speech Correction.** (2:2:0 ea.) A.W.S. Prerequisites: Speech 480, 481, 482. Staff
Supervised practice in handling of various types of speech and hearing disorders.

Graduate Courses

- 603 (252). **Radio and Television Projects.** (2-4:2-4:0) A.W.S. Staff
- 604 (249). **Selected Reading in Radio and Television.** (2-4:2-4:0) A.W.S. Staff
- 605 (243). **History of Radio and Television Programming.** (3:3:0) S. Staff
- 621 (201). **Ancient Rhetoric and Oratory.** (3:3:0) A. Bateman
- 622 (202). **History of British Public Speaking.** (3:3:0) W. Bateman
- 623 (203). **History of American Oratory and Public Address.** (3:3:0) S. Staff
- 640, 641, 642 (281a, b, c). **Graduate Clinical Practice in Speech and Hearing.** (1-3:1-3:0 ea.) A.W.S. Staff
- 643 (289). **Methods and Problems of Research in Speech.** (3:3:0) A. Staff
- 645 (282a). **Advanced Studies in Stuttering.** (3:3:0) A.W.S. Prerequisite: Speech 475. Morley
- 646 (282b). **Advanced Studies in Cleft Palate.** (3:3:0) A.W.S. Prerequisite: Speech 542. Morley
- 647 (282c). **Advanced Studies in Cerebral Palsy.** (3:3:0) Prerequisite: Speech 542. Mecham
- 648 (282d). **Advanced Studies in Aphasia.** (3:3:0) A.W.S. Prerequisite: Speech 542. Mecham
- 650 (283). **Advanced Audiology.** (3:3:0) A.W.S. Prerequisite: Speech 473. Jex
- 656 (New). **Special Projects in Speech Pathology.** (1-4:1-4:0) W.S. Staff
May be repeated to a total of 4 hours.
- 660 (235). **Theory of Interpretation.** (3:3:0) W. Gledhill, Woodbury
- 661 (236). **Oral Interpretation of Classical Literature.** (3:3:0) W. Hansen, Woodbury
- 662 (215). **Regional Dialects.** (3:3:0) S. Prerequisite: Speech 260. Clinger
- 663 (237). **Program Building and Lecture Recital.** (3:3:0) S. Gledhill, Mitchell
- 664 (225). **History of the Theatre, I.** (3:3:0) A.W.S. Hansen
- 665 (226). **History of the Theatre, II.** (3:3:0) A.W.S. Hansen
- 666 (227). **History of the Theatre, III.** (3:3:0) A.W.S. Hansen

667 (292).	History of Acting. (3:3:0) A. Styles and theory.	Woodbury
668 (294).	Special Problems in Theatre History. (1-5:1-5:0)	Staff
671 (232).	Experimental Theatre. (2-4:2-4:0) W.	Hansen
672 (290).	Problems of the Producing Director. (3:3:0) S.	Hansen
673 (264).	Advanced Play Production. (3:3:0) A.W.S.	Hansen
674 (234).	Projects in Theatre. (2-4:2-4:0)	Staff
675, 676, 677 (228).	Stage Design. (3:1:2 ea.) A.W.S.	Staff
678 (240).	Stage Lighting. (1-3:1-3:0) A.S.	Staff
690 (250).	Seminar in Mass Communications. (2-4:2-4:0) A.W.S.	Staff
691 (294).	Selected Readings in Radio and Television. (2-4:2-4:0) A.W.S.	Staff
692 (210).	Seminar in Public Speaking. (2-4:2-4:0) A.	Staff
693 (New).	Special Studies in Speech Pathology. (1-4:1-4:0) W.S.	Staff
695 (288).	Seminar in Psychoacoustics of Speech and Hearing. (1-3:1-3:0) A. W.S.	Staff
	May be repeated to a total of 4 hours.	
696 (230).	Seminar in Interpretation. (1-4:1-4:0) A.	Staff
697 (238).	Seminar in Arena Theatre. (1-3:1-3:0) A.W.S.	Hansen
	May be repeated to a total of 9 hours.	
699 (300).	Thesis for Master's Degree.	Staff

These courses also count in Speech:

- Humanities 459. Lyric Theatre. (3:3:0)
 Journalism 211. News Writing. (3:2:2)
 Journalism 341. Radio-TV News Writing. (3:2:2)
 Journalism 346, 347, 348. Radio-TV Workshop. (2:0:6 ea.)
 Journalism 351. Radio and Television Advertising. (3:3:0)
 Journalism 352. Radio-TV Commercial Continuity Writing. (3:3:0)
 Journalism 671. Research Methods in Mass Communications. (3:3:0)
 Journalism 672. Mass Communications and Society. (4:4:0)

Television

(See courses in Journalism and in Speech and Dramatic Arts.)

Textiles

(See courses in Clothing and Textiles.)

Theology and Religious Philosophy

(See courses in Religion.)

Youth Leadership

Associate Professor: Royal B. Stone (chairman, 205 SFH)

A major in youth leadership is given through the College of Recreation, Physical and Health Education, and Athletics.

Requirements for a Major

Thirty-five hours of upper division credit in youth leadership courses are required plus the following courses from the College of Recreation, Physical and Health Education, and Athletics: Health Education 121, 130, 311, 325; Physical Education 123, 126, 135, 144, 160, 164, 165; Recreation 201, 371.

Other elective courses are recommended to provide additional experience and opportunities for the student: Physical Education 133, 180, 181, 182, 226; Recreation 503, 537.

Suggestion for a Minor

Twenty-four hours of credit are required for a minor in youth leadership.

Courses are required as follows: 311, 312, 372, 373, 374, and other approved courses in allied fields.

Upper Division Courses

- 301 (101). National Camp School.** (1:lecture and lab. for 8 full days and nights) Su. Nat'l Staff
Required of youth leadership majors only. This is a course given by the National Council, Boy Scouts of America.
- 302 (102). Summer Camp Administration.** (1: full summer) Su. Nat'l Staff
Required of youth leadership majors only. Each youth leadership major will be required to serve on a local summer camp council staff for at least one summer camp season.
- 305, 306, 307 (130a, b, c). Council Operating Committees and Their Function.** (3:3:1 ea.) A.W.S. Taught in 1959-60 and alternate years. Stone
Study of how operating committees establish the program and objectives to bring the full scouting program, through district committees and unit leaders, to the boy.
- 310 (133). History and Development of the National and Local Council.** (3:3:0) W. Taught 1959-60 and alternate years. Stone
Divided into two parts: organization of the national council, its function, relation and service to local councils; and organization of the local council, its functions, relation, and service to sponsoring bodies.
- 311 (131). Commissioner Service.** (3:3:1) A. Stone
Duties and responsibilities of the council, district, assistant district, and neighborhood commissioners. Includes techniques of guiding committee personnel and conducting district roundtable meetings.
- 312 (134). District Operation.** (3:3:0) S. Stone
Designed to teach the student the operations and functions of the district committee.
- 332 (132). Scouting's Sponsors and Public Relations.** (2:2:0) W. Stone
Study of scouting's relationships to its major sponsoring bodies. churches (Protestant, Catholic, Jewish, Church of Jesus Christ of Latter-day Saints), service clubs, fraternal orders, government agencies, schools. Study of the public relations program of the Boy Scouts of America.

- 372 (122). **Cub Leadership.** (3:3:1) A. Stone
Designed to teach men how to administer the cub scout program within an institution.
- 373 (123). **Boy Scout Leadership.** (3:3:1) W. Stone
Designed to teach men how to use the patrol method to bring scouting to boys 11-14 years of age.
- 374 (124). **Explorer Leadership.** (3:3:1) S. Stone
Arranged to bring to students the latest techniques in working with young men 14-17 years of age and bringing them the explorer program (land exploring, sea exploring, and air exploring).
- 375 (125). **Program Planning.** (3:3:0) A. Taught 1959-60 and alternate years. Stone
Involves the student in actual unit program planning processes, combined with practical application of principles of program planning in unit situations in the local council.
- 377 (Ch. Adm. 167). **Scouting in the L.D.S. Church.** (2:2:1) A.W.S. Stone
Not required for youth leadership major. Designed to acquaint students in church administration with functions and place of cubbing, scouting, and exploring in the Church.
- 390 (190). **Field Activity Course.** (1:1:1) W. Stone
Camporee, rally, circus, expositions and cub craft shows are media through which Scouting demonstrates to its public what it is doing with and for youth.
- 391 (120). **Conference Planning Techniques.** (2:2:1) S. Stone
Theory and practice of planning conferences. Various techniques of pre-conference involvement. Laboratory: Explorer Scout Conference and/or Boy Scout Pow-wow on B.Y.U. campus.

Zoology and Entomology

Professors: Hayward (chairman, 263 B), V. M. Tanner.

Associate Professors: D E. Beck, H. J. Nicholes, W. W. Tanner.

Assistant Professors: A. L. Allen, D. M. Allred, S. L. Wood.

Instructor: Simmons.

Zoology is the basic animal science. The courses offered in this department meet the needs of the following groups of students: (1) those seeking to satisfy the general education requirement in biological science; (2) those planning to specialize in entomology, zoological natural history, or physiology and experimental biology; (3) those preparing to teach biology; and (4) those planning to enter an applied zoological science, such as medicine, dentistry, veterinary medicine, or agriculture. Any deviations from these requirements must be approved by the chairman of the department.

By counseling early with the department chairman and staff the prospective major will be able to determine which supporting courses should be elected from this and other departments. Virtually all prospective majors should take the following courses during the freshman year:

	Hours
English (composition)	6 or 9
Religion	6
Physical and health education	4
Chemistry	10 to 15
Mathematics	5 or 10
General Zoology 105	5
Total Hours	36 to 49

Requirements for a Major

A candidate for the bachelor's degree in zoology should fulfill (1) the University general education requirements for graduation, (2) the general departmental requirements for graduation, and (3) the requirements of one of the optional sequences in zoology.

The general departmental requirements for all majors are Zoology 105, 176, 212, 385, 496, and 497 — 17 hours.

Optional Sequences

Entomology: Zoology 230, 332, 365, 530, 550 and 328 or 334—27 or 28 hours.
Botany 101, 112, 123, and 470—19 hours.

For those intending to do graduate work in entomology, the following additional courses are recommended: Zoology 263, 321, 328, 334, 370, 371, 376, 532, 538, Mathematics 111 or 112; Chemistry 111, 112, 113, or 105, 106, 107; 351, 352; Physics 111, 112—10 hours; Bacteriology 121 or 301; Geology 111, 112; foreign languages (German, French, or Russian).

Natural History: 230, 263, 550, and one each of the following: 321 or 332 or 417, 343 or 345, 346 or 347, 365 or 373—30 or 31 hours.

For students intending to do graduate work in natural history, the following additional courses are recommended: 357, 365, 370, 371, and those courses above not selected by option; Chemistry 111, 112, 113, 351, 352; Physics 111, 112, 113; Bacteriology 121 or 301; Botany 101, 112, 123; Geology 111, 112; and one foreign language (French, Spanish or German).

Physiology and Experimental Zoology (including pre-medical and pre-dental): Zoology 263, 365, 370, 373, 328 or 376 or 417, 550—28 hours; Botany 101—5 hours; Bacteriology 301—5 hours; Chemistry 111, 112, 113, 221, 351, 352, 353—35 hours; Mathematics 111, 112—10 hours; Physics 111, 112, 113—15 hours.

Those intending to do graduate work in physiology should add Zoology 371; Mathematics 231, 232, 233, 234; and Chemistry 461, 462, 463, 581, 582, and 583.

Teaching: Zoology 164 or 263, 230, 332, 343 or 345, 346 or 347, 550, 365—31 hours; Botany 101, 112, 123, 550, and 560—25 hours; Bacteriology 121 or 301; geology, 5 hours; mathematics, 5-10 hours; chemistry, 10-15 hours; physics 8-12 hours.

Suggestions for a Minor

Zoology 105, 176, 212, 230, 164 or 263 or 365, 385, 496, 497—27 hours

Lower Division Courses

- 105 (11). **General Zoology.** (5:3:4) A.W.S. (G-BS) Staff
- 109 (11b). **General Zoology for Nurses.** (5:3:4) S. (G-BS) Staff
For nursing students only.
- 164 (45). **Human Anatomy and Physiology.** (5:3:4) A.W.S. (†G-BS) Prerequisite: Zoology 105, Botany 101 or Bacteriology 121. Nicholes
- 176 (18). **Survey Course in Heredity.** (3:3:0) A.W.S. (†G-BS) Prerequisite: Zoology 105 or Botany 101. W. W. Tanner
- 212 (12). **Invertebrate Zoology.** (5:2:6) A.W.S. Prerequisite: Zoology 105. Beck
- 230 (30). **Introductory Entomology.** (5:3:4) A.S. (G-BS) V. M. Tanner
- 261 (51). **Human Physiology for Nurses.** (4:3:2) A. Prerequisite: Zoology 109. Staff
- 263 (13). **Comparative Vertebrate Anatomy.** (5:3:4) A.W.S. Prerequisite: Zoology 105. Hayward

Upper Division Courses

- 321 (New). **Arthropodology.** (3:1:4) A. Prerequisite: Zoology 105. Allred
- 328 (133). **Medical Entomology.** (4:2:4) S. Prerequisites: Zoology 230, 321, 332. Allred
- 332 (132). **Insect Classification.** (5:2:6) S. Prerequisite: Zoology 230. V. M. Tanner, Wood
- 334 (134). **Economic Entomology.** (3:2:2) A. Taught in 1958. Prerequisite: Zoology 230. Wood
- 343 (159). **Fishes (Ichthyology).** (3:1:4) W. Taught in 1959. Prerequisite: Zoology 105. V. M. Tanner
- 345 (160). **Reptiles (Herpetology).** (3:1:4) S. Prerequisite: Zoology 105. Saturday field trips. W. W. Tanner
- 346 (158). **Birds (Ornithology).** (3:1:4) S. Prerequisite: Zoology 105. Hayward
- 347 (157). **Mammals (Mammalogy).** (3:1:4) A. Prerequisite: Zoology 105. Hayward
- 351 (128). **Aquatic Zoology.** (3:2:2) S. Taught in 1960. Prerequisite: Zoology 105. Wood

- 357 (197). **Natural and Human Resources.** (3:3:0) W. (G-BS) Taught in 1958.
V. M. Tanner
- 365 (165). **General Physiology.** (5:3:4) W. Prerequisites: Zoology 105 and general college chemistry. Staff
General and comparative physiology of cells, tissues, and functional systems of animals.
- 370 (170). **Vertebrate Histology.** (3:1:4) S. Prerequisite: Zoology 263. Hayward
- 371 (171). **Histological Technique.** (2:0:4) W.S. Prerequisite: Zoology 105; 370 recommended. Hayward
- 373 (173). **Vertebrate Embryology.** (5:3:6) S. Prerequisite: Zoology 263. Allen
- 376 (129). **Genetics.** (5:3:4) A. Prerequisite: Zoology 176 or equivalent. Allen
- 385 (175). **History of Biology.** (2:2:0) W. V. M. Tanner
- 417 (174). **Parasitology.** (4:2:4) W. Prerequisite: Zoology 105. W. W. Tanner
- 496, 497 (182, 183). **Senior Year Seminar.** (1:1:0 ea.) A.W. Staff

Advanced Undergraduate or Graduate Courses

- 512 (186). **Natural History of Local Invertebrate Fauna, Exclusive of Insects.** (3:1:4) S. Prerequisites: Zoology 212, 321. Beck
- 524 (New). **Acarology.** (3:1:4) W. Prerequisite: Zoology 321. Allred
- 530 (204). **Insect Morphology.** (3:1:4) W. Prerequisite: Zoology 230. Wood
- 533 (203). **Field Entomology.** (3:1:4) S. Prerequisite: consent of instructor.
V. M. Tanner, Wood
- 538 (New). **Immature Insects.** (3:2:2) A.S. Taught in 1960. V. M. Tanner, Wood
- 550 (146). **Principles of Ecology and Bio-geography** (5:3:4) S. (†G-BS) Prerequisites: Zoology 105, Botany 101. Saturday field trips. Hayward
- 551 (241). **Biotic Communities of North America.** (3:3:0) W. Hayward
- 566 (166). **Human Anatomy.** (5:3:4) A. Prerequisite: Zoology 105. Staff
- 573 (178). **Experimental Embryology.** (4:2:4) S. Prerequisite: Zoology 373. Allen
- 576 (239). **Advanced Genetics.** (3:3:0) W. Allen
- 578 (237). **Radiation Biology.** (3:2:2) W. Allen
- 591, 592, 593 (191 192, 193). **Field Zoology.** (3:0:6 ea.) A.W.S. Open only to students prepared to carry advanced zoological work. Staff

Graduate Courses

- 625 (255). **Distributional Study of Parasitic Arthropods.** (3:0:6) (Arr.) Prerequisite: consent of instructor. Allen
- 628 (New). **Advanced Medical Arthropodology.** (3:1:4) A.S. Allred, Beck
- 631 (201). **Insect Physiology.** (3:2:2) A. V. M. Tanner
- 632 (202). **Systematic Zoology.** (3:2:2) W. Taught in 1959. V. M. Tanner
- 633 (New). **Internal Morphology of Insects.** (3:1:4) S. Taught in 1959. Prerequisite: Zoology 530. Wood
- 636 (207). **Insect Embryology.** (3:2:2) A. V. M. Tanner, Wood

- 637 (205). **Insect Genitalia.** (3:1:4) W. Taught in 1958. V. M. Tanner
- 638 (206). **Zoological Literature and Nomenclature.** (3:3:0) S. Wood
- 639 (208). **History of Entomology.** (2:2:0) W. V. M. Tanner
- 643 (210). **Advanced Ichthyology.** (3:1:4) (Arr.) V. M. Tanner
- 645 (213). **Advanced Herpetology.** (3:1:4) S. W. W. Tanner
- 649 (New). **Comparative Anatomy and Natural History of Vertebrates.** (3:2:2) (Arr.) W. W. Tanner
- 655 (219). **Principles of Zoogeography.** (2:1:2) (Arr.) Taught in 1959. V. M. Tanner
- 661 (267). **Advanced General Physiology. Cells.** (3:3:0) A. Prerequisites: Zoology 365, 370; general college physics; organic chemistry. Nicholes
- 662 (267). **Advanced General Physiology. Secretion and Absorption.** (3:3:0) W. Prerequisite: Zoology 661. Nicholes
- 663 (267). **Advanced General Physiology. Muscle and Nerve.** (3:3:0) S. Pre-requisite: Zoology 662. Staff
- 673 (238). **Advanced Embryology.** (3:3:0) A. Allen
- 690, 691, 692 (New). **Research.** (2:0:4 ea.) A.W.S. Staff
- 693, 694, 695 (New). **Research.** (2:0:4 ea.) A.W.S. Staff
- 696, 697 (298, 299). **Graduate Seminar.** (1:1:0 ea.) A.W. Staff
- 699 (300). **Thesis for Master's Degree.** (Arr.) Staff

Adult Education and Extension Services

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Harold Glen Clark, Dean

Lynn M. Hilton, Assistant to the Dean

Bliss Crandall, Dean of Admissions and Records

Kiefer B. Sauls, Treasurer

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HISTORY AND PURPOSE

The purpose of the Extension Services is to bring the educational services of the regular University day school to those who are not now receiving them. It was called the Extension Division when it was established in 1921. At that time its program combined publicity, off-campus programs, lectures, and community services with the more formal classroom offerings and credit courses both by correspondence and lecture.

Some of these earlier functions have been assumed, in part, by special committees or departments in the University. News services, such as motion pictures and audio aids, have been expanded or added to the Extension Services. Full-time employees have replaced those who formerly did extension work during their off-time hours. The extent of the territory served has increased. Bulletins of information on evening school courses, home study subjects, lectures, and publications are available upon request.

Many teachers of the courses scheduled through the Extension Services are chosen from the regular B.Y.U. faculty. In addition, a special part-time off-campus faculty is available and is listed in the Special Instructors or Lecturers Section of this catalog.

AUDIO-VISUAL SERVICES

The Brigham Young University Audio-Visual Center is one of the largest and most complete teaching materials centers in the nation. Its purpose is to serve the departments of the University, the various Church organizations, the public schools and industry with the finest materials of instruction that can be obtained. To provide more efficient and effective service the Audio-Visual Center has departmentalized its various functions into the following areas: film rental library, equipment rentals and services, graphic arts, tape recordings, public address equipment, and on-campus film classics program.

The Audio-Visual Center operates a growing film rental library containing over 3,000 motion pictures, over 2,000 35 mm. filmstrips, and a large collection of 2" x 2" color slides. The motion pictures, film strips and slides cover a wide variety of both educational and religious subjects.

A magnetic tape recording library of over 2,000 titles is maintained. This includes such items as L.D.S. General Conference addresses, the Brigham Young University devotional assembly speeches, and other important addresses given on campus. In addition, taped radio programs of an educational nature are available on an advance rental basis or tapes may be duplicated for permanent retention.

The Audio-Visual Center offers a consultation service as well as extension courses on a credit and non-credit basis. The services include courses for graduate students, a series of conferences and institutes designed to serve the needs of teachers and administrators, and an annual A.V.A. conference sponsored by the center.

An audio-visual materials workroom, set up by the College of Education and the Audio-Visual Center, provides laboratory facilities for use by teachers and students in preparing classroom presentation materials. Research projects in use of such materials are also conducted here.

The Audio-Visual Center serves as a distribution agency for both the rental and sale of Brigham Young University Motion Picture Production Department releases.

For further information, write or call the Audio-Visual Center. A catalog listing the materials available, conditions of service, and rental rates will be sent upon request.

ON-CAMPUS ADULT EDUCATION

All on-campus courses of instruction administered through the Adult Education and Extension Services are conducted through the On-Campus Adult Education Division. Departments of the division are the Evening School, Special Courses—Institutes, and Leadership Week. Both credit and non-credit offerings are available. Flexibility of programming is maintained to meet specific needs of adults and special groups. Business, industrial, civic, social, church, and educational institutions are encouraged to contact this office if they desire special adult instruction.

Evening School. On week-day evenings, classes are conducted on campus in subject matter areas of interest to adults who desire to improve or enrich their lives through part-time education.

Regular college residence credit equivalent to daytime classes is given for all evening school classes. Anyone wishing to do so may take a class on a non-credit basis as an auditor.

Veterans are eligible to enroll under the G. I. Bill if they meet the eligibility requirements of the Veterans' Administration.

There is published quarterly a class schedule of all classes offered on the campus including early morning, late afternoon and evening classes. These class schedules, giving detailed information about all procedures, are available free of charge in the office of the Evening School. Courses listed in the Evening School schedule which do not receive eight or more registrations will be cancelled. Students who have registered in cancelled classes will be notified and invited to join classes in which there are a sufficient number of students or will be given a full refund.

At scheduled times during each registration period, trained counselors are available to Evening School students in the office of the Extension Services. If the student wishes, he may secure professional help in making educational and vocational plans or in working through related personal problems. A person wishing to confer with a counselor at a time not regularly scheduled may arrange for an appointment. There is no charge or obligation to the student for these services.

Day students may enroll in Evening School classes on their regular registration card by picking up class cards, Section 90. No extra fee is charged.

Students taking only evening classes register at the Extension Services Office. The fee is \$6.00 per credit hour, plus a \$1.00 registration fee. Students not enrolled for ten or more hours in Evening School may purchase activity cards and health services for an additional \$15.00.

Students who register after the officially scheduled registration days are required to pay a late registration fee of \$2.00. Registration is not complete until all fees are paid. (Veterans are required to pay the late fee personally.) One dollar is charged for each change slip presented after the first week of the quarter, unless the action is caused by the Evening School.

Each student registered through the Extension Services who discontinues attendance at class **MUST** use the proper procedure to withdraw by coming to the Extension Center. Otherwise, the student will be given an "Incomplete" mark for the course. The mark will be changed to "Failure" if not removed by the next quarter in residence or in one year, whichever is the sooner.

A pro-rated refund of tuition fees, less a \$5.00 withdrawal charge, will be made to those who withdraw properly from evening classes during the first four weeks of the quarter. There is no refund for withdrawals occurring after the fourth week of the quarter.

Time and place of evening school registration are listed in the general school calendar in the front of this catalog.

Students registering for only evening classes register until 9:00 p.m. on the same dates at the Extension Services Office.

Courses are available through Evening School in the following departments:

Accounting	Geography
Art	Geology
Bacteriology	History
Bible and Modern Scripture	Horticulture
Botany	Human Development and Family Relationships
Business Education and Office Management	Industrial Arts and Drawing
Business Management	Languages
Chemical Engineering Science	L.D.S. Church Organization and Administration
Chemistry	Mathematics
Church History	Mechanical Engineering Science
Civil Engineering Science	Physical Education for Men
Clothing and Textiles	Physical Education for Women
Economics	Physics
Education: Instruction	Political Science
Educational Administration	Psychology
Educational Philosophy and Programs	Sociology
Educational Research and Services	Theology and Philosophy
English	Zoology and Entomology
Food and Nutrition	

Special Courses and Institutes. The Special Courses and Institutes Department is organized to meet the academic needs and desires of many different age and educational background groups. It provides flexible and varied programs on a non-credit basis at the Brigham Young University Campus and offers courses appealing either to specific interest groups or to the public at large. It also offers lecture series, institutes, departmental conferences, seminars, workshop forums and special programs from many fields such as fine arts, religion, humanities, physical sciences, commerce, industrial arts and athletics.

This department attempts to reach those who seek stimulation and training for personal satisfaction or for professional advancement. Since the programs are on a non-credit basis, they are flexible as to content and presentation. Offerings, presented on a high academic basis, are extremely informative, yet informal, in nature. Courses are generally six to ten weeks in length, one and one-half hours per night, although length and time may vary with each program.

The instructional staff for the Special Courses and Institutes Department is composed of members of the regular B.Y.U. faculty and other professional and academic specialists. Tuition fees are charged in accordance with the length of the course or with special expenses which may be involved. Although advance registration is advisable through the Extension Services Office, one may register at the first class meeting.

Persons representing groups which desire special courses or lectures on the B.Y.U. campus may initiate them by contacting the Special Courses and Institutes Department.

Following are some of the programs presented by the Special Courses and Institutes Department.

Basketball Workshop for Boys
 Body Mechanics and Physical
 Reconditioning for Women
 Boy Scout Pow-wow
 Charming You
 Children's Rhythms
 Civic Improvement and Development
 Film Classics for Children
 Fun with Photography
 Fundamentals of Amateur Radio
 Operation
 The Fascinating Search—Genealogy
 Getting Along with People
 Ground School for Amateur Pilots

House Planning and Construction
 Hymnology and Baton Technique
 Hy-speed Longhand
 Law for the Layman
 Life of the Master
 Masterpieces of Musical Literature
 Reading
 Missionary Approach to the Gospel
 Modern Dance for Women
 Our Lord of the Gospels
 Reading Better and Faster
 Real Estate Principles and Practices
 Swimming Instruction for Women

Leadership Week. For thirty-five years adults from all walks of life have spent their vacations attending the five-day festival of learning at the Brigham Young University. In order to stimulate people's interest for "The Fabulous Years Ahead," all of the colleges of the University, through their faculties and off-campus consultants, endeavor to provide selected educational experiences which will help members of the Church and other patrons of the University to become better leaders in the professions, the home, the community, and the Church. A few of the areas of instruction are these: human relations, scientific advancements, the world of business, better teaching methods, music, drama and speech activities, teen-age problems, and handicraft arts. Instruction in the scriptures and lectures from the General Authorities and others also add greatly to the interest and value of Leadership Week. Special artistic presentations enhance the offering of this week.

The dates of the 1959 Leadership Week are June 22-27. Advance registration is encouraged to insure proper housing. Both food and housing are available at moderate cost.

In addition to the general Leadership Week held at the University in Provo each year, local institutes are held by faculty members in other communities, upon invitation from the Latter-day Saint stakes concerned.

OFF-CAMPUS INSTRUCTION

The Off-Campus Instruction division of the Adult Education and Extension Services has three departments: Off-Campus Credit, Lectures and Short Courses (non-credit courses and lectures taught off-campus), and Publications (publishes speech and course outlines given on the Brigham Young University campus or by Brigham Young University faculty members).

Off-Campus Credit. Many adult groups off-campus make requests for regular credit or non-credit courses to be offered in their locality. A request of this type is filled by scheduling a university teacher to travel to the selected place and conduct the course. Credit courses give regular Brigham Young University credit and may be used to renew a teaching certificate, to apply toward a degree, or to broaden one's intellectual and spiritual horizons. The minimum number of students required for a class is determined by the distance of the class from the campus.

Brigham Young University credit is available to students in off-campus courses sponsored by the University of Utah or Utah State University where the course has the prior approval of the Brigham Young University Extension Services chairman and dean involved. Conversely, courses sponsored by the Brigham Young University Extension Services will register University of Utah and Utah State University students where these other institutions approve.

Requests for courses should be directed to Off-Campus Courses, Extension Services, Brigham Young University. Ordinarily such classes meet one evening a week for eleven weeks. A wide choice of courses is available. Courses listed in the body of this catalog, subject to the approval of the dean and department chairman concerned, may be scheduled off campus. The usual tuition is \$7.50 per credit hour. If the class is far distant from campus, students may vote to increase their own tuition in order to have a lower minimum number of students.

Following are classes that have been offered through the off-campus credit program: Economics 593, Seminar; Education: Instruction 226, Art for Elementary Teachers; 605, Audio Visual Materials and Procedures; 614, Analysis of In-Service Problems; 624, Arts and Crafts for Elementary Teachers; 635, Social Studies in the Elementary Schools; 660, Education of the Exceptional Child; 693, Independent Readings; Educational Research and Services 510, Tests and Measures for the Classroom Teacher; 630, The Teaching of Remedial Reading; 650, Guidance Workshop; English 318, Advanced Imaginative Writing; 561, Early American Literature; Geography 310, Geography of North America; Geology 503, Geology of Utah; Health 501, Health Education Workshop; History 170, American Heritage; Physical Education 310, Physical Education for Teachers of Intermediate Grades; Physics 301, History of Physics; Political Science 320, Contemporary Problems; Scripture 511, Israel's Prophets; Speech 680, Seminar in Study of Speech Handicapped Children.

Lectures and Short Courses. The Lectures and Short Courses Department of the Adult Education and Extension Services was created to present non-credit programs off-campus—lecture series, institutes, classes appealing to particular interest groups, conferences, forums, and special promotions. The varied curriculum includes programs in religion, the fine arts, engineering, athletics, and many specialized fields. This department attempts to reach persons who seek stimulation and training in special areas for personal satisfaction or professional advancement with instruction on an academic basis. Courses, institutes, and lectures are presented each year in most of the western states.

Since this department is on a non-credit basis, its program need not be concerned specifically with filling requirements, but may be geared to the special needs and desires of the group. Presentations are informative and informal, but of high academic quality. Courses are generally eight to ten weeks in length, one or one and one-half hours per night, one night a week. All programs are led by specialists prominent in their fields. Many instructors and speakers are drawn from the wealth of leadership at Brigham Young University, although the instructional staff is not restricted to the University.

The registration fee covers expenses such as modest honorariums for the lecturers, publicity, administration, and travel and supplies. Persons desiring courses or lectures to be presented in their locale may initiate them by contacting the Lectures and Short Courses Office.

Following are examples of programs presented by the Lectures and Short Courses Department.

Amateur Radio
Atoms for Peace
Audio-Visual Aids Classes
Children's Rhythms
Counseling Service
Directing the Play
Doctrine and Covenants
Expectant Parents
Family Solidarity
Fun with Photography
Home Planning and Construction
Interior Decorating
Know Your Religion

Life of the Master
Masterpieces of Musical Literature
Missionary Approach to the Gospel
Modern Languages for Children
Reading Better and Faster
Real Estate
Secretarial Workshop
Special Lecture Series
The Book of Mormon Testifies
The Story of the Pearl of Great Price
The Fascinating Search—Genealogy
Utah History
Writer's Workshop

Extension Publications. Devotional assembly speeches, as well as many lecture series, are reproduced in mimeographed form by the Extension Publications Department. These are sold at cost.

At the end of each school year, complete bound sets of the assembly speeches may be purchased. These are particularly useful in ward and home religious libraries.

Following are listings of inspirational publications:

Speeches of the Year: Among those who spoke during the past year and whose speeches are available in mimeographed form are Presidents David O. McKay, Stephen L. Richards, and J. Reuben Clark, Jr.; Elders Harold B. Lee, Mark E. Petersen, LeGrand Richards, Hugh B. Brown, and Marion D. Hanks; President Ernest L. Wilkinson; and Mr. Cecil B. deMille.

An Apostle Speaks to Youth: Printed booklets containing address of General Authorities: "A Style of Our Own," Elder Spencer W. Kimball; "Chastity," Elder Mark E. Petersen; "Be Ye Clean," Elder Spencer W. Kimball; "Building Your Marriage to Last Forever," Elder LeGrand Richards; "Tragedy or Destiny," Elder Spencer W. Kimball.

Lecture Series: Each publication contains lectures on various religious subjects. Among those available are "Joseph Smith, The Extraordinary," "Know Your Doctrine and Covenants," "The Trial of the Stick of Joseph," "Eden to Egypt," and "Heroines in the Church."

Leadership Week Lectures: New publications available from Leadership Week, 1957. **Research Procedure and Evaluation of Evidence**, Genealogy Textbook, Derek Harland; "Economic Significances of the Word of Wisdom," Henry J. Nicholes; "Games for Children," Cynthia Cowan; "Family Recreation," Israel Heaton; "Portraits in the Life of the Master," Ivan J. Barrett; "Family Night," Monroe J. and Shirley Paxman; "Health Aspects of the Word of Wisdom," David Geddes; "L.D.S. Family Living," John Farr Larson; "Shakespeare," Briant S. Jacobs; "Messages of the Doctrine and Covenants," Roy W. Doxey; "Great Families in the Book of Mormon," Rodney W. Turner.

Missionaries, teachers in Sunday School classes and other church auxiliaries, classes, speakers, and students of the scriptures find these publications stimulating because of the timely stories, interpretations of current event, and faith-promoting experiences presented to the student body of the University.

For full details about these and available publications and prices, write to Extension Publications, Brigham Young University, Provo, Utah.

HOME STUDY

Adult Education and Extension Services offers correspondence work to aid in widening the educational horizons of the many people who cannot take college work in residence. It is the desire of the Extension Services to assist anyone anywhere who wishes to continue his education. The essential characteristic of home study is that the relationship of instructor and student is always individual. The only requirement for registration in home study is the assurance of those directing the work that the student is prepared to pursue the course with profit.

Supervised individual instruction from a highly trained instructor has a definite advantage to the correspondence student, but perhaps the greatest advantage comes through the serious application and independent thinking the student must contribute in order to complete his course. His success in the work depends largely upon initiative and eagerness for knowledge and upon the quality of his work.

Credit. Correspondence courses are not a short cut. With few exceptions each course carries credit equivalent to the corresponding course given in residence. Not more than 35 hours of the total 186 required for graduation may be correspondence credit. No graduate credit can be earned in correspondence courses. Credits are transferable to other standard institutions upon the same basis as standard credits are received at the Brigham Young University.

Registration. Students may register for home study courses at any time during the year. The home study catalog, containing detailed information and application blanks, may be obtained free of charge by writing to Home Study, Adult Education and Extension Services, Brigham Young University, Provo, Utah.

A student may not take correspondence work while in residence without the consent of his dean. A course may be completed at the rate of not more than three assignments per week. The standard length of courses is five lessons per quarter hour. The registrar's office, Brigham Young University, Provo, Utah, will give the necessary information on entrance and graduation requirements and transfers of credits.

The State Department of Public Instruction, State Capitol, Salt Lake City, Utah, or the Department of Public Instruction in the state in which the student resides should be consulted about preparing for teacher's certification.

Examinations. Examinations are required in all correspondence courses unless otherwise stipulated. Examinations may be taken in the Home Study Office or elsewhere under the supervision of a responsible school official (principal or superintendent). Examinations will not be given until all lessons are completed.

Fees: The enrollment fee is \$5.00 per quarter hour. The enrollment for a high school course is \$15 for one unit of credit or \$8.50 for one-half unit credit.

U.S.A.F.I. Courses. Adult Education and Extension Services is cooperating with the Armed Forces Institute at Madison, Wisconsin, to provide Brigham Young University home study courses at a reduced cost to men and women who are on active service in the Army, Navy, Air Force, Marine Corps or Coast Guard. Members of the armed forces who wish to enroll for such courses should contact the education officer or write directly to Home Study, Brigham Young University, Provo, Utah, for specific instructions and fees for approved courses.

Veterans. The Brigham Young University is approved by the Veterans' Administration to offer correspondence courses under Public Law 550. All veterans should first contact their local Veterans' Administration regional office and find out whether or not they are still eligible to continue their schooling under the G.I. benefits, and if so what procedures they must follow.

Purchase of Textbooks. Textbooks may be obtained through application to the Home Study Department at the time of registration. Required texts should be ordered at this time in order to avoid delay in beginning the assignments.

Home Study (Correspondence) Courses:**Accounting**

101x, 102x (1x, 2x). Elementary Accounting. (5-5)	Crandall
230x (35x). Mathematics of Business. (3)	White
350x, 351x (150x, 151x). Intermediate Accounting. (5-5)	McIlff
450x (188x). Federal and State Taxes. (3)	Smith

Agronomy

141x (41x). Soils. (3)	Farnsworth
260x (20x). Cereal Crops. (3)	Allred
262x (22x). Forage Crops. (3)	Allred
305x (195x). Soil Fertility. (3)	Hallam

Animal Husbandry

102x, (2x). History of Breeds of Livestock. (5)	Richards
161x (21x). Elements of Dairying. (5)	Richards
170x (90x). General Poultry. (3)	Morris
207x (7x). Feeds and Feeding. (5)	Shumway
325x (160x). Meats and Meat Preparation. (3)	Staff
335x (154x). Beef Production. (4)	Richards
345x (156x). Swine Production. (3)	Shumway

Art

110x (12x). Color and Design. (2)	Wilson
111x (11x). Basic Design. (2)	Wilson
121x (23x). Basic Drawing. (2)	Wilson
122x (22x). Figure Drawing. (2)	Gunn
139x (39x). Pen Lettering. (2)	Gunn
140x (40x). Brush Lettering. (2)	Gunn
259x (59x). Ceramics. (2)	Wilson
321x (121x). Interpretative Drawing. (2)	Wilson
368x (168x). Art for Elementary Teachers. (3)	Wilson
406x (104x). Art History and Appreciation. (3)	Mathews

Bacteriology

121x (1x). General Bacteriology. (3)	Donaldson
311x (160x). Sanitation and Public Health. (3)	Larson

Botany

123x (3x). Plant Classification. (5)	Harrison
145x (18x). Principles of Genetics. (3)	Stutz
451x (166x). Conservation of Natural Resources. (3)	Christensen

Business Education and Office Management

111x (11x). Gregg Shorthand. (4)	Stansfield
220x (31x). Business English. (3)	Stansfield
320x (110x). Business Report Writing. (3)	Stansfield
468x (178x). Fundamentals of Business Education. (3)	Croft

Chemistry

100x (1x). Chemistry. (3)	Swenson
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Drawing

113x (43x).	Elementary Architectural Drawing. (3)	Snell
244x (44x).	Architectural Drawing. (3)	Snell
245x (45x).	Architectural Drawing. (3)	Snell
248x (47x).	Instrumental Perspective. (2)	Snell

Economics

101x (1x).	Introduction to Economics. (5)	Davies
247x (74x).	Economic and Financial History of the United States. (5)	Davies

Economics and Management of The Home

330x (130x).	Home Management. (3)	Bastian
470x (170x).	Homemaking Apartment. (4)	Bastian

Education

226x (106x).	Elementary Instruction: Art for Elementary Teachers. (3)	Wilson
340x (110x).	Elementary Instruction: Children's Literature. (4)	Hammond
361x (158x).	Elementary Instruction: Health Education for Elementary Teachers. (3)	Geddes
362x (159x).	Secondary Instruction: Health Education for Secondary Teachers. (3)	Hart
305x (175x).	General Instruction: Audio-Visual Education. (3)	Tyndall
325x (171x).	General Instruction: Materials and Methods of Safety Education. (2)	Hart

General Instruction

— (177x).	The Teaching of Remedial Reading. (3)	Krider
— (179x).	Methods of Teaching the Slow Learning Child. (3)	Krider
— (180x).	Education of Exceptional Children. (3)	Krider
310x (100x).	Educational Administration: The State, The School, and The Teacher. (3)	Barnett
305xa (101xa).	Educational Psychology: Development and Learning. (3)	Harris
305xb (101xb).	Educational Psychology: Learning. (3)	Downing

Educational Tests and Measurements

510x (110x).	Tests and Measurements for the Classroom Teacher. (3)	Harris
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Personnel and Guidance

415x (100x).	Philosophy of Education: Educational Values. (3)	Clark
550x (145x).	Guidance Services in Public Schools. (3)	Isaksen

Engineering

301x, 302x, 303x (101x, 102x, 103x).	Engineering Mechanics. (5-5-5)	Calder, Fuhrman, Perry
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English

111x, 112x, 113x (1x, 2x, 3x).	Composition and Literature. (3-3-3)	West
217x (17x).	Business English. (3)	Stansfield
218x (18x).	Imaginative Writing. (3)	Cheney
221x (21x).	English Grammar. (4)	West
225x (31x).	Vocabulary Building. (4)	Young

- 261x, 262x, 263x (41x, 42x, 43x). Masterpieces of American Literature. (2-2-2) Thomas
- 271x, 272x, 273 (71x, 72x 73x). Masterpieces of English Literature. (2-2-2) Carroll
- 318x (118x). Advanced Imaginative Writing. (3) Cheney
- 331x (192x). The English Novel to 1832. (4) B. Clark
- 332x (193x). The English Novel from Dickens to Hardy. (4) B. Clark
- 333x (194x). The Modern English Novel. (4) B. Clark
- 350x (164x). The Bible as Literature. (3) Thomas
- 585x (185x). Tennyson. (3) Carroll
- 586x (186x). Browning. (3) Carroll
- (34x). Classic Myths. (4) Carroll
- (44x). Contemporary American Poets. (2) Hart
- (75x). Masters of the English Short Story. (3) Clark
- (132x). Victorian Poetry. (3) Carroll
- (133x). Victorian Prose. (3) Carroll
- (165x). Greek Life and Drama (3) Carroll

Food and Nutrition

- 110x (10x). Introductory Foods. (4) Thomas
- 115x (5x). Fundamental Nutrition. (3) Thomas
- 240x (11x). Menu and Meal Planning. (4) Thomas

Geography

- 105x (1x). Elementary Geography. (3) Bullock
- 110x (12x). Geography and World Affairs. (5) Duke
- 310x (110x). Geography of North America. (5) Tuttle
- 323x (123x). Economic Geography. (5) Layton
- 420x (120x). Geography of Latin America. (5) Layton
- 430x (130x). Geography of Europe. (5) Tuttle
- 584x (176x). Political Geography. (3) Duke

Geology

- 105x (1x). General Geology. (3) Bissell
- 106x (2x). Physical Geology. (2) Bissell
- 107x (3x). Historical Geology. (2) Bissell
- 306x (106x). Geomorphology. (5) Bullock

Health Education and Safety

- 130x (1x). Personal Hygiene. (2) Robison
- 325x (157x). Materials and Methods of Safety Education. (2) Hart
- 361x (158x). Health Education for Elementary Teachers. (3) Geddes
- 362x (159x). Health Education for Secondary Teachers. (3) Hart

History

- 100x (1x). History of Civilization. (5) Swenson
- 120x (20x). American History. (5) Poll
- 121x (21x). American History. (5) Poll
- 312x (112x). Close of the Middle Ages. (3) Swenson
- 366x (166x). History of Utah. (3) Poll
- 504x (104x). Greek History. (3) Swenson
- 507x (107x). Roman History. (3) Swenson
- 521x, 522x, 523x (121x, 122x, 123x). History of Modern Europe. (3-3-3) Poll

531x (131x). History of Russia Since 1900. (3)	Mabey
540x (140x). History of England. (3)	Jensen
541x (141x). History of England. (3)	Jensen
550x, 551x (150x, 151x). History of Latin America. (3-3)	Hunt
553x (153x). History of Mexico. (3-3)	Hunt
565x (155x). History of California. (3)	Fielding
570x (170x). American Colonial History. (3)	Fielding

Homemaking Education

— (140x). Home Making Education, Methods. (2)	Poulson
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Horticulture

101x (1x). Principles of Pomology. (3)	Ashton
107x (7x). Floriculture. (3)	Reimschiessel

Human Development and Family Relationships

210x (40x). Child Development. (3)	Story
260x (85x). Foundations for Marriage. (2)	Cannon
261x (15x). Latter-day Saint Family. (2)	Anderson
322x (150x). Experience with Children. (3)	Morrell

Journalism

211x (61x). News Writing. (3)	O. Smith
305x (105x). History of Journalism. (5)	O. Smith
490x (106x). Journalism and Society. (3)	O. Smith
571x (111x). Magazine Article Writing. (3)	Butterworth

Languages

French

201x, 203x, 205x (101x, 103x, 105x). Second Year French—Reading and Vocabulary Building. (3, 3, 3)	Clark
202x, 204x, 206x (102x, 104x, 106x) French. Grammar and Composition (2,2,2)	Clark
321x, 322x, 323x (121x, 122x, 123x). French. Grammar and Composition—Advanced. (3, 3, 3)	Clark
431x (131x). French. Masterpieces of French Literature. (3)	Clark
442x (112x). French. Survey of French Literature and Culture. (3)	Clark

German

201x, 203x, 205x (101x, 103x, 105x). Second Year Reading in German. (3,3,3)	Anderson
202x, 204x, 206x (102x, 104x, 106x). Second Year Grammar and Composition in German. (2, 2, 2)	Gubler
431x, 432x, 433x (131x, 132x, 133x). Masterpieces of German Literature. (3,3,3)	Anderson

Italian

201x, 203x, 205x (101x, 103x, 105x). Second Year Reading in Italian. (3,3,3)	Watkins
441x, 442x 443x (131x, 132x, 133x). Masterpieces of Italian Literature. (3,3,3)	Watkins

Latin

201x, 203x, 205x (101x, 103x 105x). Second Year Latin. (3,3,3)	Clark
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202x, 204x 206x (102x, 104x, 106x). Latin—Composition and Grammar. Translation and Vocabulary Building. (2,2,2) Clark

Portuguese

202x, 204x, 206x (102x, 104x, 106x). Second Year Grammar and Composition. (3,3,3) de Jong

431x, 432x, 433x (Masterpieces of Brazilian Literature. (3,3,3) de Jong

Russian

201x, 203x, 205x (101x, 103x, 105x). Second Year Russian—Reading and Vocabulary. (3,3,3) Gubler

202x, 204x, 206x (102x, 104x, 106x). Second Year Russian—Grammar and Composition. (2,2,2) (Will be made available on request.) Gubler

Spanish

101x (1x). First Year Spanish. (5) Wilkins

201x, 203x, 205x (101x, 103x, 105x). Second Year Reading in Spanish. (3,3,3) Wilkins

202x, 204x, 206x (102x, 104x, 106x). Second Year Grammar and Composition. (2,2,2) Taylor

321x, 322x, 323x (121x, 122x, 123x). Third Year Composition in Spanish. (3,3,3) Valentine, Wilkins

431x (131x). Third Year Reading in Spanish. (3) Wilkins

Library Science

363x (163x). Library Science for Teachers and Administrators. (3) Knight

Mathematics

101x (1x). Algebra. (5) Haupt

111x (11x). College Algebra. (5) Haupt

112x (12x). Plane Trigonometry. (5) Haupt

231x (13x). Analytic Geometry. (5) Hales

232x (91x). Differential Calculus. (4) Haupt

233x (92x). Integral Calculus. (4) Haupt

234x (93x). Differential and Integral Calculus. (4) Haupt

Music

484x, 485x, 486x (184x, 185x, 186x). History of Music. (3-3-3) Wakefield

537x (New). Music for Elementary School Teachers—Advanced. (3) Prerequisite: Music 237 or equivalent. Groesbeck, Terry

Physical Education

314x (134x). Intramural Sports—Administration. (2) Soffe

Physics

101x (1x). Essentials of Physics. (3) Compton

104x. (New). Fundamentals of Physics. (3) Dudley

137x (21x). Weather and Climate. (4) Hales

127x (16x). Descriptive Astronomy. (3) Hales

137x (21x). Weather and Climate. (4) Hales

177x (26x). Elementary Photography. (3-4) Hales

Political Science

110x (10x). U. S. Constitution. (5) Hunt

112x (12x). Foreign Governments. (5) Caldwell

- 115x (15x). Introduction to International Relations. (5) Riggs
 584x (176x). Political Geography. (3) Tuttle

Psychology

- 101x (1x). Study Habits. (2) Moffitt
 105x (5x). Psychology of Adjustment. (3) Howell
 111x (11x). Survey Course. (5) Howell
 320x (120x). Psychology of Childhood. (3) Taylor
 321x (122x). Psychology of Adolescence. (3) Taylor
 335x (165x). Business Psychology. (3) Moffitt
 340x (143x). Mental Hygiene. (3) Taylor

Recreation

- 331x (131x). The Theory of Play. (3) Holbrook

DIVISION OF RELIGION

Bible and Modern Scripture

- 111x, 112x, 113x (11x, 12x, 13x). An Introduction to the Book of Mormon and Its Teachings. (2-2-2) Doxey
 123x (23x). An Introduction to the New Testament and Its Teachings. (2) Bentley
 301x, 302x (101x, 102x). Gospel Teachings from the Old Testament. (2-2) Rasmussen
 313x (113x). The Life of Jesus. (2) Gunn
 314x (114x). The Life and Letters of Paul. (2) Gunn
 321x, 322x, 323x (121x, 122x, 123x). An Introduction to the Book of Mormon and Its Teachings. (2-2-2) Doxey
 331x, 332x, 333x (131x, 132x, 133x). The Doctrine and Covenants. (2-2-2) Doxey
 338x (138x). The Pearl of Great Price. (3) Clark

Church History

- 301x, 302x (101x, 102x). Latter-day Saint Church History. (2-2) Berrett

L.D.S. Church Organization and Administration

- 141x, 142x, 143x (41x, 42x, 43x). Missionary Approach to the Gospel. (2-2-2) Anderson
 301x (101x). Priesthood and Church Government. (2) Clark
 313x (113x). Research Procedure and Evaluation of Evidence. (4) Harland
 314x (114x). Genealogical Research in the United States. (4) Bennett
 315x (115x). Genealogical Research in England and Wales. (4) Smith
 316x (116x). Danish Ancestral Research. (4) Christiansen
 317x (117x). New Methods and Sources in Seeking Forefathers. (2) Bennett
 318x (118x). Advanced Course in Genealogical Research Procedure. (3) Bennett

Theology

- 105x, 106x (5x, 6x). Principles and Doctrines of Mormonism. (2-2) Riddle
 303x (103x). The Principles, Doctrines, and Philosophy of the Church of Jesus Christ of Latter-day Saints. (2) Doxey

Sociology

- 111x (11x). Elementary Principles of Sociology. (5) Symons

112x (12x). Social Problems. (5)	Smith
392x (128x). Race and Racial Problems. (3)	Larsen
400x (170x). Achieving Success in Marriage. (3)	Bradford
420x (152x). Population Problems. (3)	Smith
423x (156x). Rural Sociology. (3)	Payne
449x (136x). Community Organization and Leadership. (3)	Dyer

Speech

319x (161x). Stage Craft. (2)	Struthers
520x (160x). Theory of Play Production. (3)	Gledhill
531x (180x). Speech Correction. (3)	Morley
536x (186x). Organic Speech Disorders (3)	Mecham

Zoology

357x (197x). Genetics and Racial Hygiene. (3)	Tanner
385x (175x). History of Biology. (2)	Tanner

COURSES ON A NON-CREDIT BASIS

Scripture

1-nc, 2-nc, 3-nc. A Survey Course in the New Testament.	Ricks
4-nc, 5-nc, 6-nc. A Survey Course in the Book of Mormon.	Ricks

HIGH SCHOOL COURSES

Art

10x. High School Art. One unit credit.	Gunn
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English

1x. Remedial Language Usage. One-half unit credit.	Alder
20x. Types of Literature. One unit credit.	Mercer
21x. Senior English. One unit credit.	Mercer

Geography

30x. World Geography. One unit credit.	Layton
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History

40x. United States History. One unit credit.	Caine
41x. World History. One unit credit.	Caine

Languages

60x. German. One unit credit.	Staff
61x. Spanish. One unit credit.	Staff

Mathematics

5x. Remedial Arithmetic. One-half unit credit.	Haupt
70x. First Course in Algebra. One unit credit.	Marshall
71x. Second Course in Algebra. One unit credit.	Marshall
72x. Plane Geometry. One unit credit.	Haupt
73x. Consumer Mathematics. One unit credit.	Haupt

Social Science

80x. Problems in a Democracy. One unit credit.	Caine
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TRAVEL STUDIES

B.Y.U. Travel-Study tours are designed for people from seventeen to seventy years of age (seventeen to thirty-six for "student tours") who wish to increase their knowledge and understanding of their own nation and of other lands and peoples through purposeful, educational travel. Membership for most tours is not limited to B.Y.U. students or former students; anyone within the specified age limit who is willing to adhere to the standards of the Church of Jesus Christ of Latter-day Saints may file application for membership.

All of the Brigham Young University travel-study tours are non-commercial, non-profit, educational projects. They are sponsored by a university which recognizes the value of organized educational travel experience and senses the importance of broadening cultural horizons and promoting international understanding and good will.

Opportunities are provided for Brigham Young University travel-study groups to meet Latter-day Saint mission presidents, missionaries, and members of the Church of Jesus Christ of Latter-day Saints who reside in the distant missions of the Church.

College credit is available to tour participants who complete the study program as outlined by the academic department which is co-sponsoring the travel-study tour.

B.Y.U. 1958 Summer Travel-Study Tours

U.S.A.

1. Washington Seminar and Early American History Tour June 15-July 2
Dr. Melvin P. Mabey, assistant professor of history and political science
Credit: 5 hours in political science and 3 hours in history
2. Eighth Annual L.D.S. Church History Tour July 26-August 17
Director: Dr. Russell Rich, chairman, Church History Department
Credit: 2-4 hours in church history or sociology.
3. Alaska and Canadian Rockies Study Tour August 25-September 17
Director: Dr. George Hansen, past dean of Graduate School and eminent geologist
Credit: 3 hours in geography
4. Socio-Cultural Tour of the Hawaiian Islands August 2-August 15
Co-Directors: Professor Scott Orrock, Counseling Service
Dr. Reed Bradford, chairman, Sociology Department
Credit: 3 hours in sociology

LATIN AMERICA

5. Mexico Study Program June 16 - August 7
Director: Dr. H. Darrel Taylor, Languages Department, Spanish
Credit: Up to 10 hours in Mexican civilization and Spanish language
6. Combined Circle Tour of Central America, Book of Mormon Lands and South America July 12 - August 10
Director: Dr. Jay B. Hunt, Director, B.Y.U. Travel Study Program, and assistant professor of history and political science
Credit: 3 to 6 hours Latin American history and civilization

EUROPE

7. Student Tour of Europe—South (ages 17-36) June 29 - August 26
Director: Dr. Keith Duke, Geography Department
Assistant Director: Dr. Stewart Grow, chairman, Political Science Department
Credit: 3 to 9 hours in history and geography
8. Student Tour of Europe—North (ages 17-36) June 29 - August 26
Director: Dr. Don Earl, Music Department
Assistant Director: Dr. Eugene Campbell, History Department
Credit: 3 to 9 hours in history and music

9. Peoples and Cultures of Europe—56 days June 29 - August 26
Director: Dr. A. Smith Pond, dean of Graduate School
Credit: 3 to 9 hours in history and economics
 10. Peoples and Cultures Tour of Europe—20 days *August 27 - September 17
 11. Peoples and Cultures Tour of Europe—10 days *August 27 - September 5
10 days free time in Europe
Directors: Dean Harold G. Clark, Dean Leonard W. Rice, Dr. Jay B. Hunt
Credit: Up to 6 hours in history and English literature
(B.Y.U. Home Studies cooperation)
 12. Round the World Study Tour June 9 - August 22
Director: Dr. Richard Poll, chairman, History Department
Credit: 3 to 9 hours in history and political science
- *Dates will be revised to coincide with British Temple Dedication.

Proposed 1959 Travel Study Program

EUROPE

1. Cradle of Civilization (Near East and Western Europe)
2. Peoples and Cultures Tour of Europe (2 sections)
3. Student Tour of Europe—North
4. Student Tour of Europe—Northeast
5. Student Tour of Europe—South

LATIN AMERICA

6. Study Tour of Central America and Book of Mormon Lands
7. Mexico Travel-Study Program (Spanish)

NORTH AMERICA

8. Quebec Travel-Study Program (French)
9. Socio-Cultural Tour of Hawaiian Islands

U. S. A.

10. Washington Seminar and Early American History Tour
11. Ninth Annual L.D.S. Church History Tour
12. Rocky Mountain Geography Study Tour
13. Indians of the Southwest Travel-Study Program

B.Y.U. ADULT EDUCATION CENTERS

Sensing the obligation of the Church University to provide educational opportunities in harmony with L.D.S. standards for persons away from Provo, the Board of Trustees has established two adult-education centers. One, in Rexburg, Idaho, began in September 1956, and the other, in Ogden, Utah, started in September 1957. These centers draw their faculties from the B.Y.U. and from professionally qualified persons who may be living in their areas. Local instructors are approved by B.Y.U. departments and administration by the same system used in hiring regular full-time faculty.

The credit that is offered at these centers may be accepted toward a bachelor's or master's degree except that the student must do at least 45 hours of work on the bachelor's degree and 30 hours on the master's degree on the Provo campus.

The center at Rexburg, housed in the Ricks College buildings, provides off-campus courses, Evening School, Summer School, Leadership Week, and special programs. In addition audio-visual materials and instruction are available by special arrangement with the home office in Provo.

The B.Y.U. Ogden Adult Education Center is housed in a building of its own at 555 24th Street, in Ogden. Special adult classes with the B.Y.U. flavor are offered there five nights a week.

Statistical Summaries, 1957-58

ENROLLMENT SUMMARY — 1957-58
 PROVO, UTAH,
 AS OF MARCH 26, 1958

College	Freshman	Sophomore	Junior	Senior	Graduate	Men	Women	Total
Biological and Agricultural Sciences	197	232	206	207	7	769	80	849
Commerce	355	404	334	388	9	1061	429	1490
Education	337	381	492	498	23	552	1179	1731
Family Living	239	168	129	94	3	7	626	633
Fine Arts	230	148	114	136	1	300	329	629
Graduate School					577	439	138	577
Humanities and Social Sciences	199	255	255	257	8	606	368	974
School of Nursing	83	41	31	40	1	2	194	196
Physical and Engineering Sciences	544	370	271	267	*70	1487	35	1522
Recreation, Health, Physical Education and Athletics	106	79	85	100	7	266	111	377
General Registration	1320	404	58	5	3	969	821	1790
TOTALS	3610	2482	1975	1992	*709	6458	4310	10768
Summer Quarter - 1957						1390	1029	2419
Total Daytime College Students on Campus								13187
Evening College Students on Campus						1239	1384	2623
TOTALS								15810
Less Duplications, 1957 Summer School								— 1191
Less Duplications, Day Students Taking Evening Classes (4 Quarters)								— 1577
Net Cumulative Total - College Level								13042
B.Y.U. HIGH SCHOOL								
Junior High School						85	71	156
Senior High School						94	53	147
B.Y.U. ELEMENTARY SCHOOL						97	101	198
Total B.Y. High and Elementary Schools						276	225	501
TOTAL STUDENTS ON B.Y.U. CAMPUS								**13,543

*Includes 60 5th Year Engineers

**Does not include Extension Class and Correspondence students who were included in similar tables for prior years. See page 410 for Extension Services statistics.

[illegible]

Oakland-Berkeley	85	San Bernardino	40	Tacoma	28	Brazilian	8
Ogden	17	San Diego	74	Taylor	44	British	3
Oneida	24	San Fernando	26	Taylorsville	20	California	62
Oquirrh	12	San Francisco	29	Temple View	12	Canadian	21
Orange County	43	San Joaquin	35	Teton	31	Central American	10
Orem	164	San Jose	25	Timpanogos	112	Central Atlantic States	46
Orem West	13	San Juan	49	Tooele	30	Central States	53
Palmyra	69	San Luis	31	Tucson	14	East Central States	16
Palo Alto	77	Santa Barbara	36	Twin Falls	78	Eastern States	49
Panguitch	37	Santa Ana	1	Uintah	26	Finnish	6
Park	16	Santa Monica	54	Union	40	French	3
Parowan	9	Santa Rosa	43	University	15	Great Lakes	54
Pasadena	65	Santaquin-Tintic	29	Utah	254	Gulf States	17
Phoenix	42	Seattle	34	Uvada	20	Hawaiian	27
Pioneer	6	Sevier	68	Valley View	18	Mexican	7
Pocatello	12	Sharon	171	Virginia	5	Netherlands	2
Portland	65	Shelley	20	Walnut Creek	33	New England	23
Portneuf	23	Smithfield	5	Wasatch	72	New Zealand	3
Provo	196	Snowflake	42	Washington	50	North Central States	38
Raft River	2	South Bear River	13	Wayne	16	North German	1
Redondo	35	South Blackfoot	29	Weber	6	Northern California	16
Reno	32	South Box Elder	17	Weiser	47	Northern Far East	10
Reseda	22	South Carolina	19	Wells	12	Northern Mexico	3
Rexburg	19	South Davis	23	West Boise	48	Northwestern States	65
Richland	69	South Idaho Falls	70	West Jordan	46	Norwegian	2
Rigby	28	South Los Angeles	58	West Pocatello	23	Samoan	1
Riverdale	12	South Ogdens	28	West Utah	183	South African	1
Riverside	10	South Salt Lake	22	Wilford	26	South Australian	1
Roosevelt	22	South Sanpete	22	Willamette	52	Southern Far East	7
Rose Park	8	South Sevier	45	Woodruff	37	Southern States	48
Sacramento	30	South Summit	34	Yellowstone	13	Spanish American	6
Shreveport	2	Southern Arizona	3	Young	68	Southwest Indian	8
St. George	28	Spanish Fork	99	Zion Park	16	Uruguay	2
St. Johns	42	Springville	131	MISSIONS			54
St. Joseph	27	Star Valley	24	Argentina	1	West Central States	2
Salmon River	10	Sugar House	22	Australian	5	West German	29
Salt Lake	18	Summit	14			Western Canadian	32
						Western States	32

MISSIONS

Argentine	1
Australian	5

**BRIGHAM YOUNG UNIVERSITY 1957-58 CUMULATIVE AUTUMN, WINTER AND
SPRING ENROLLMENT, REGULAR DAY TIME COLLEGE STUDENTS
FROM THE COUNTIES OF UTAH AS OF MARCH 26, 1958**

Beaver	15	Iron	25	Sevier	128
Box Elder	69	Juab	37	Summit	47
Cache	29	Kane	14	Tooele	70
Carbon	46	Millard	113	Uintah	68
Daggett	4	Morgan	10	Utah	2752
Davis	142	Piute	18	Wasatch	74
Duchesne	56	Rich	6	Washington	49
Emery	43	Salt Lake	731	Wayne	16
Garfield	27	San Juan	41	Weber	166
Grand	7	Sanpete	92		
					4895

**REGISTRATIONS THROUGH ADULT EDUCATION AND EXTENSION SERVICES
CALENDAR YEAR 1957**

Academic College co-sponsoring courses and programs	Credit Courses (Including Home Study)		Non-credit Courses (Programs having 4 or more class meetings)		Non-credit Attendance in Programs having fewer than 4 class meetings		Total	
	Enroll- ments	*F.T.E.S.	Enroll- ments	*F.T.E.S.	Enroll- ments	*F.T.E.S.	Enroll- ments	*F.T.E.S.
Inter-College	47	6.26	134	7.16	7536	326.47	7717	339.89
Hum. & Soc. Sci.	1787	134.55	367	30.25	467	9.77	262	174.57
Religion	1840	96.78	1681	43.86	315	5.55	3836	146.19
Education	1567	95.70	70	3.41	200	44.26	1837	143.37
Phys. & Eng. Sci.	528	43.26	213	10.71	225	1.11	966	55.08
Fine Arts	664	39.02	87	4.91	1665	9.50	2416	53.43
Commerce	488	39.34	160	6.84			648	46.18
Rec., Phys., Health	118	7.13	294	5.96	430	17.20	842	30.29
Bio. & Agri. Sci.	494	29.17					494	29.17
Family Living	307	20.60	151	3.66			458	24.26
Nursing								
Ricks (Idaho)	503	23.44					503	23.44
High School	129	21.90					129	21.90
TOTAL	8530	557.15	3157	116.74	10838	373.86	22525	1047.75

*F.T.E.S. means "Full-time equivalent student." One full-time equivalent student is determined by:

- (1) if credit, student credit hours divided by 45
- (2) if non-credit, student hours of participation
 - divided by 375 if lecture type class
 - divided by 525 if lecture-lab combination
 - divided by 750 if studio or shopwork
 - divided by 1125 if athletic type class

Total Estimated Different Persons Within Each Extension Credit Program for 1957:

Home Study	1907
Evening School	1420
Off-campus Credit	1369
BYU Ricks Center	918
BYU Ogden Center	92
Travel Studies	108
**TOTAL	5814

**This total does not eliminate duplications between Extension credit programs themselves nor between these programs and the B.Y.U. day school students.

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